



# **TURKISH DEFENCE PRODUCTS GUIDE**

**UNDERSECRETARIAT for DEFENCE INDUSTRIES,  
MoND, TÜRKİYE**

**MMIX**



On behalf of the  
International Cooperation Dept of SSM

Publisher: **Hakkı ARIS**  
Research: **İbrahim SÜNNETCİ**  
Technical Coordination: **Mehmet DEMİRKOL**  
Implementation: **Osman ŞAHİNYAVUZ**  
Conceptual Graphics & Cover Design: **Etkileşim Design Works**

Mönch Media TR Ltd  
Halit Ziya Sok, #26/9  
TR-06540  
[www.monch.com.tr](http://www.monch.com.tr)  
[info@monch.com.tr](mailto:info@monch.com.tr)

Printing: **Ankara Ofset**



Ankara  
MMIX





We, the Undersecretariat for Defence Industries (SSM), are proud to share the achievements of the Turkish Defence Industry with all our friends and allies, the world over.

Since its establishment in 1985, the SSM has been entrusted with the responsibility for a very large number of major defence industry projects, totalling over US\$30 Billion. And it is the results of the painstaking and sustained efforts at meeting all the challenges associated with creating such areas of expertise that the national defence industrial capabilities of Turkey, today boast. As a result, the extent and magnitude of Turkey's defence industry activities have shown a dramatic transformation towards world-class standards.

And it is no surprise that we have been able to increase the Turkish Defence Exports multi-fold over the last decade through openly sharing our hard-earned capabilities.

Today the Turkish defence industry shows a strong presence in numerous areas from aerospace, naval shipbuilding, tracked and wheeled armoured vehicles to specialised textiles, armaments and munitions, missiles, rocketry as well as advanced defence electronics.

Turkish companies from different sectors are proving themselves strong competitors in the international defence market and we believe that our defence industrial capabilities and initiatives will strongly contribute to the future of regional and global peace.

We are ready to cooperate with you in state-of-the-art technologies.  
Let us make your challenges, our own!

*M. Sazg*  
Undersecretary



# CONTENTS



## LAND

### PLATFORMS

7

Tactical Wheeled Vehicles	8
Tactical Wheeled Armoured Vehicles	9
Specialized Vehicles	13
Tracked Armoured Vehicles	13
Main Battle Tanks	14



## NAVAL

### PLATFORMS

15

Combat Vessels	16
Modernization Programmes	16
Coast Guard SAR Vessel	17
Combat and Support Vessels	18
Coast Guard Boats and Patrol Boats	20
Unmanned Naval Vehicles	23



## AEROSPACE

25

Aircraft and Helicopter Modernization	26
Training Aircraft	27
Helicopters	27
Unmanned Aerial Vehicles (UAVs)	28
Engine and Airframe Components	30
Qualification and Certification	32








## DEFENCE

### ELECTRONICS

33

Radars / Sensors	34
Sensors and Thermal Sights	36
Communication and Information Technologies	38
Electronics and Information Systems	42

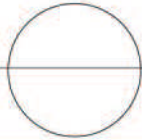
# CONTENTS

	Electronics and Electronic Systems	44
	Consoles and Control Systems	47
	Simulators	48
	Command and Control Systems	53
	Electronic Warfare	54
	Jammer	55
	<b>WEAPON SYSTEMS &amp; AMMUNITIONS</b>	<b>57</b>
	<b>SUPPORT SYSTEMS &amp; LOGISTIC SERVICES</b>	<b>67</b>
	<b>MILITARY CLOTHES/FINERY EQUIPMENT</b>	<b>73</b>
	<b>R&amp;D/ ENGINEERING</b>	<b>77</b>
	<b>CONTACT INFORMATION</b>	<b>81</b>





# LAND PLATFORMS





**BMC**



**BMC 185-09B (4x4) 2.5 Ton TTA**

Troop and Cargo Carrier, Command Control Vehicle, Ambulance, 120mm Mortar Carrier, Communication Vehicle, Mobile Repair Workshop, Patient and Injured Carrier and Special Purpose Vehicle.

**Export Countries:** Azerbaijan, Georgia and Macedonia.



**BMC 235-16 P (4x4) 5 Ton TTA**

Troop and Cargo Carrier, Artillery Towing Vehicle, Water Tanker, Fuel Tanker, Towing Vehicle with Trailer, Bridge Equipment Carrier, and Special Purpose Vehicle.

**Export Countries:** Azerbaijan, Bangladesh, Georgia and Macedonia.



**BMC 380-26P (6x6) 10 Ton TTA**

Troop and Cargo Carrier, Artillery Towing Vehicle, Water Tanker, Fuel Tanker, Towing Vehicle with Trailer, Bridge Equipment Carrier, Recovery Vehicle and Special Purpose Vehicle.



**BMC 827 (6x4) 20,000 LT UAIT**

Refuelling/defuelling of military or commercial aircraft, and helicopters.  
Air transportable by C-130 cargo aircraft.

**NATO Stock No:** 2320270085605



### Otokar

#### Land Rover Defender 110

Land Rover Defender series vehicles produced under license; and to date have been delivered over 22,000 4x4 tactical wheeled vehicles. In operation with many military and security forces around the world. 2.4 litre 4-cylinder common-rail turbo-charged diesel engine, 6-speed manual transmission, 2-speed transfer box and locking centre differential, permanent 4-wheel drive and up to 3,500kg towing capacity.

**Export Countries:** Albania, Algeria, Azerbaijan, Bosnia, Bulgaria, Georgia, Iraq, Kazakhstan, Macedonia, Nakhchivan, Nigeria, Pakistan, Romania, TRNC, Turkmenistan, Tunisia, UK, US and Uzbekistan.

NATO Stock No: 71A10A / 71A26A / 71A74A / 71A88A / 72A13A / 72A19B / 72B18A

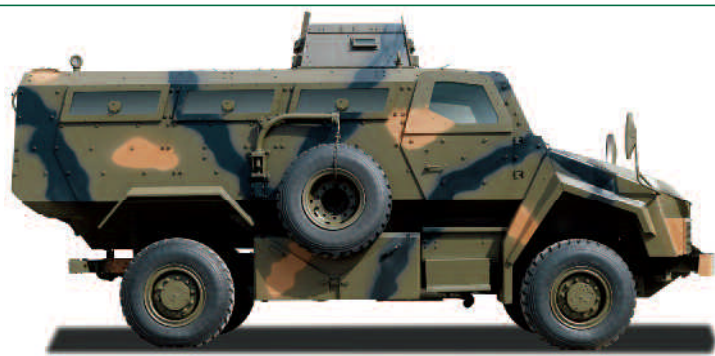


## TACTICAL WHEELED ARMoured VEHICLES



#### BMC 350-16 Z MRAP

Mine Resistant Ambush Protected (MRAP) 10-Ton Vehicles.



#### BMC WCV

(4x4) Weapon Carrier Vehicle, for weapon systems as TOW, MILAN, Grenade Launcher and Machine Gun.







### PARS® 8x8 Wheeled Armored Vehicle

A new generation of Wheeled Armored Combat Vehicles (in 4x4, 6x6, and 8x8 configurations) with special emphasis on Mobility, Protection, Payload, and growth potential, named PARS (Leopard). The vehicles employ the latest designs and technology from the commercial automotive industries, which have been militarized to meet the performance and durability of modern military operational requirements. The features of PARS were designed from the outset to allow the vehicle configuration to have significant growth capability.



### EJDER Armored Personnel Carrier (APC)

The EJDER 6x6 APC has a design that fulfils two important requirements of today's combat zone: The transfer of a highly armour-protected crew to the combat zone; and high protection against hand-made explosives. The EJDER 6x6 APC can carry 12 crew members who, due to the vehicles outstanding design, can sit ergonomically in the vehicle, with room available for their weapons and ammunition.

**Export Countries:** Georgia.



### Armored Reconnaissance Vehicle

The EJDER 6x6 Armored Reconnaissance Vehicle has been designed to carry out Surveillance and Reconnaissance missions, which are important requirements in the combat zone. The vehicle is available with Efficient Reconnaissance Surveillance Equipment, which has a day/night long-range reconnaissance, a laser telemeter and a navigation system. The vehicle also has a reconnaissance by fire capability, offering the high level of armour protection that may be needed during reconnaissance missions.

### Otokar

#### Armoured Personnel Carrier (APC)

The Otokar Armoured Personnel Carrier is a versatile 4x4 armoured vehicle that is adaptable to a wide range of paramilitary and security roles, boasting a universal design built on a cost effective platform.

**Engine:** 4-cylinder common-rail turbo-diesel engine with intercooler developing 90kw (122hp) at 3,500rpm

**Gearbox:** 6 forward, 1 reverse mechanical gearbox

**Transfer Box:** Permanent 4-wheel drive, 2 speed with high and low ranges central differential lock.

**Axles:** Rigid beam axles with single reduction spiral differentials.

**Suspension:** Coil springs and hydraulic shock absorbers with panhard rod and anti-roll bars

**Brakes:** Servo assisted front and rear disk brakes on all four wheels.

**Export Countries:** Algeria, Bahrain, Bangladesh, Iraq and Pakistan.

**NATO Stock No:** 73A01A / 73B00A / 73B01A / 73B05A / 73B04A



#### Armoured Internal Security Vehicle (IS-V)

The Otokar Armoured Internal Security Vehicle, designed for paramilitary and security use around the world, has a specially designed body and mission equipment for use in urban and residential areas.

**Engine:** 6-cylinder turbo diesel engine with intercooler developing 430hp.

**Gearbox:** 16 forward, 2 reverse.

**Transfer Box:** Permanent 4-wheel drive, 2 speed with high and low ranges central differential lock.

**Axles:** Heavy duty axles with 100% differential locks.

**Suspension:** Heavy duty parabolic springs at front, heavy duty semi elliptic springs at rear, hydraulic telescopic shock absorbers, anti-roll bars.

**Fuel Tank:** 200 Litre Capacity







### Otokar



#### Akrep Armoured Patrol Vehicle

Akrep is a special armoured patrol vehicle that has been developed on well proven mechanical parts, offering day/night vision and a 'made to mission' weapon station.

**Engine:** 4-cylinder common-rail turbo-diesel engine with intercooler, developing 90kw (122hp) at 3,500rpm

**Gearbox:** Manual 6-speed.

**Transfer Box:** Permanent 4-wheel drive, 2-speed with high and low ranges, central differential lock.

**Axles:** Rigid beam axles with single reduction spiral differentials.

**Suspension:** Coil springs and hydraulic shock absorbers with panhard rod and anti-roll bars.

**Brakes:** Servo assisted front and rear disk brakes on all four wheels. Drum type parking brake acting on transmission.

**Fuel Tank:** 110 litres capacity with Explosion Suppression System.

**Export Countries:** Algeria and TRNC.

**NATO Stock No:** 73A10A / 73B10A / 73A15A



#### Cobra

The Cobra armoured vehicle has been the subject of great interest, with its superior mobility and its high level of ballistic protection, as well as its adaptability and modularity in various missions.

**Engine:** Water cooled turbo charged 6.5lt, 190hp.

**Gearbox:** 4-speed, automatic.

**Transfer Box:** Full time, 4-wheel drive with lock, 2-speed.

**Front/Rear Axles:** Independent double A-frame, with hypoid differentials.

**Fuel Tank:** 155lt, mounted inside the armoured hull.

**Export Countries:** Algeria, Bahrain, Georgia, Maldives, Nigeria, Slovenia, UAE and the US.

**NATO Stock No:** 83A00A / 83A01A / 83A06A / 83A18B / 83A19A / 83A42A



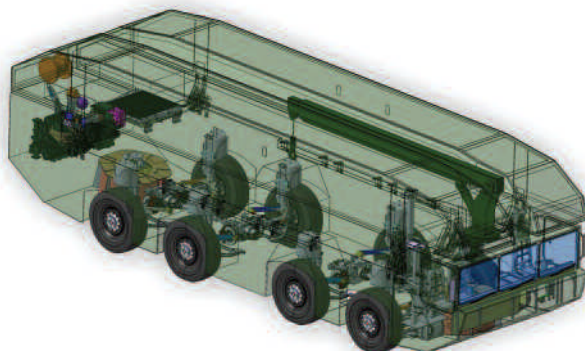
#### KAYA Mine Protected Armoured Vehicle

The KAYA Mine Resistant Cargo/Troop Carrier vehicle offers a high level of protection, in particular against IED's and explosives, whilst maintaining high mobility over adverse terrain. The KAYA uses Daimler Chrysler Unimog 5000 running chassis and during its design phase, mine blasts under the vehicle hull and wheels were simulated using special software. These blast tests were carried out successfully as per NATO standards.

### Mobile Floating Assault Bridge

- Under development
- MFAB system will be based on the 8x8 PARS vehicle
  - Aluminium alloy fuselage and ramps
- Two transport team with ASY 70 class tracked vehicle transport capacity
- Composed of three vehicles, the system has AYS 100 class wheeled vehicle transport capacity

**Crew:** 3 or 4, **Vehicle Weight:** Maximum 35 tonnes,  
**Maximum Speed:** 50km/h, **Range:** 600 km.



### TOMA Riot Control Vehicle

Riot Control Vehicle (TOMA) has proven its superiority since its launch, and sales are continuing both domestically and abroad. TOMA is still being used successfully especially by the General Directorate of Security, Gendarmerie General Command of Turkey, and by various foreign police organisations.

**Export Countries:** Several Middle East, African and Commonwealth of Independent States [CIS] countries.



## TRACKED ARMoured VEHICLES

### ACV 300 Armoured Combat Vehicle

The ACV 300 vehicle is currently in service with the Turkish Armed Forces, Malaysian Armed Forces, Philippines and United Arab Emirates. The ACV 300 is a combat proven medium weight, low silhouette armoured vehicle capable of high mobility in all kinds of terrain and amphibious operations on lakes and rivers.

**Speed:** 65km/h, **Range:** 490km, **Crew:** 11

**NATO Standard, TAF Delivery:** 1991-2005  
**Export Countries:** Malaysia, Philippines and the UAE.







### M113 Modernization

FNSS has completed upgrading and modernization of the M113 family of vehicles, offering the latest Detroit Diesel 6V53T with the Allison X200-B transmission, this enhanced version of M113A300 provides improved safety, high power to weight ratio and high reliability. FNSS upgrade program is qualified from the original OEM of the M113 vehicles.

**Benefits & Advantages:** Reduced life cycle costs, better fuel economy, better reliability, reduced maintenance, reduced training, better availability, world wide spare parts, commitment to customer satisfaction.

**Export Countries:** Saudi Arabia and Jordan (Sub-system procurement) for M113 Modernization and Bahrain and Philippines for ACV-300 Modernization.



### ACV-S Armoured Combat Vehicle

The ACV-S is the general name for the family of modern high performance vehicles, all derived from the highly successful ACV 300. These vehicles have proven themselves with a number of Armies worldwide. ACV-S offers the latest developments in high value vehicle performance but maintains the advantages of commonality with ACV 300 family of vehicles. The ACV-S offers 30% more volume under armour, 70% more payload capacity than ACV 300, and mobility equal or better than a modern main battle tank.

**Export Countries:** Malaysia and Saudi Arabia.

## MAIN BATTLE TANKS

# Otokar



### ALTAY National MBT

Signed on July 29, '08 between the SSM and Main Contractor Otokar, the Turkish National Main Battle Tank [ALTAY] Programme contract became effective on January 15, '09. Valued at around US\$500 Million contract covers the works to be carried out under the first phase of the programme and consists of three stages; concept design, detail design, prototyping and qualification. Under the contract Otokar in cooperation with ADD/Rotem of South Korea and its local subcontractors; Aselsan, MKEK and Roketsan will design, develop, produce, tests and qualify four 3rd+ generation ALTAY MBT prototypes in about 7 years [78.5 months] through the use of existing local capabilities to the maximum extent. If the prototypes pass testing successfully, then a further 250 MBTs will be manufactured in the Series Production Phase, which will be based on a separate tender.

Under the programme Aselsan will provide an indigenous Fire Control System and the communications equipment, while MKEK will provide the 120mm 55-calibre smooth-bore main gun for the ALTAY MBT and Roketsan will be responsible for the local production of the Modular Armour Package of the MBTs under Hyundai Rotem license.







HAVELSAN

aselsan



### National Vessel (MilGem)

The MilGem (National Vessel) Programme of the Turkish Navy covers the local design, integration and construction of a total of 12 (1+1 prototype+6+4) corvette-type patrol and Anti-Submarine Warfare (ASW) vessels. Istanbul Naval Shipyard Command is responsible for the construction of the prototype vessels, while Turkish Navy R&D Command (ArMerKom) is responsible for the design. Following the construction, delivery and testing of the first two vessels, construction responsibility for the remaining vessels will be transferred to private shipyards. TNF Command is responsible for the performance and delivery schedule of the platform, while the SSM is responsible for the procurement of all equipment and services. STM has been appointed by the SSM for the procurement of materials, services and systems for the

project. The Combat Systems will be sourced by the Aselsan-Havelsan Partnership; and the Electrical Systems will be delivered by Anel Marin of the Anel Group.

TCG Heybeliada (F-511) has an overall length of 99m, the length at waterline is 90.5m, and the maximum beam is 14.4m. With a displacement of 2,000 tonnes and 3.59m design draft, the ship will be fully operational up to sea state 5. The main propulsion system comprises one gas-turbine and two diesel engines (CODAG), giving TCG Heybeliada a maximum speed of 29+ knots, and an economical speed of 15 knots thanks to the propulsion system, producing 30,000 kW. The corvette has been designed to operate with a complement of 93, including personnel for flight operations. The TCG Heybeliada corvette will have an endurance of 3,500nm at 15 knots.

## MODERNIZATION PROGRAMMES



### GENESIS

#### (Ship Integrated Combat Management System)

The G-Class Frigate Combat Management System Modernisation Program (G-GSMP) was initiated by Turkish Naval Forces Command for the modernisation of its G-Class (Ex-FFG-7) frigates by removing the obsolete Combat Management System and integrating GENESIS (Ship Integrated Combat Management System). Havelsan carried out the system development, integration, hardware and software testing of the GENESIS Ship Integrated Warfare Management System; and provides the necessary training and ongoing maintenance services for the life-span of the system using domestic resources.



### Coast Guard Search & Rescue Vessels

RMK Marine was charged with leading the Search and Rescue Vessel Programme (four ships) in 2007, which was the biggest naval shipbuilding programme ever awarded to private industry in Turkey.

The Coast Guard Search & Rescue Vessels are to be equipped with advanced weapons and electronic systems, and the design and production of the command control system software, electro-optical director, communication systems, and gyro and operator consoles will all be carried out in Turkey. The first vessel is due for delivery in 2011 while the others are planned for delivery in 2012. The ships, in addition to S&R tasks will also be utilized in fire fighting, environmental pollution protection and smuggling prevention operations.



### Principal Characteristics:

**LOA:** 88,6m

**Length BP:** 80m

**Beam:** 12,20m

**Draught:** 3,61m

**Displacement:** 1,700 ton

### Performance:

**Speed:** 22 knots

**Range:** 3,000 nautical miles at 15 knots

**Endurance:** 10 days

### Propulsion:

Two diesels, driving two controllable pitch propellers.

**Main Engine:** MTU 16V1163TB73L

**Reduction Gear:** Renk

**Shaft and Propeller:** Fincantieri LPM

**Bow Thruster:** Rolls Royce

### Weapons and Electronics System:

State of the art Combat Systems – Aselsan

1 x 40mm twin barrel gun

2 x 12,7mm Machine gun

Command and Control System

New generation Fire Control System

Surveillance radar

Advanced Electro-optical Systems

Integrated Communication Systems

Integrated Bridge System

Navigation Systems.







### Landing Ship Tank

**LOA:** 135m  
**Length BP:** 120m  
**Beam Moulded:** 16.40m  
**Full Load Disp.:** 5,200 tons  
**Speed:** 18+  
**Endurance:** 30 days  
**Range:** 5,000nm/15 kts  
**Cargo Capacity:** 1,200 tons, 4 LCVP, 4 Mexafloat, 1 Mid Size Helicopter  
**Crew:** 146  
**Embarked Forces/Trainees:** 350



### Landing Craft Tank

**LOA:** 79.85m  
**Length BP:** 72.50m  
**Beam Moulded:** 11.70m  
**Full Load Disp.:** 1,155 tons  
**Speed:** 20 kts  
**Endurance:** 7 days  
**Range:** 400nm/16 kts  
**Cargo Capacity:** 320 tons  
**Crew:** 22  
**Embarked Forces/Trainees:** 250



### SNR-LST (Landing Ship Tank)

The new-generation Landing Ship Tank (SNR-LST) is a fast amphibious vessel of upper-intermediate size with significant armaments. It has been designed to play a major role in the transportation of large numbers of mobilised vehicles and military forces on amphibious raids as a flag ship and logistical vessel.



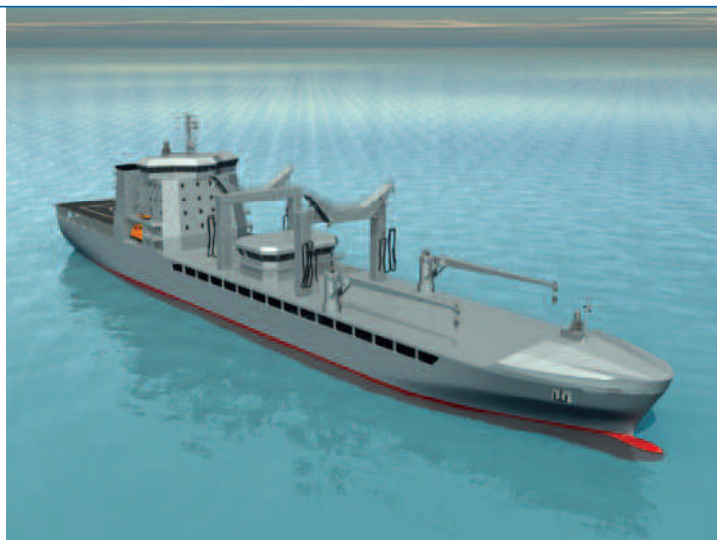
### SNR-LCT (Landing Craft Tank)

The new generation Landing Craft Tank (SNR-LCT) is a fast-beaching craft of intermediate size which will play a major role in transporting vehicles and military forces on amphibious raids.



### SNR-RLT (Replenishment & Logistics Tanker)

The SNR-RLT is an innovative solution to the support of long-range missions of a naval fleet. The SNR-RLT can refuel the fleet, as well as helicopters, and can also provide full logistical support in terms of any container-packed equipment, replenishment and supplies.



### Offshore Patrol and Support Vessel (OPSV-1500)

The OPSV-1500 is a monohull vessel that is designed to perform offshore patrol, logistics supply and rescue missions at heavy seas. It is equipped with a redundant diesel-driven podded propulsion system, allowing flexible manoeuvring, and conforming to naval norms/standards and classification rules.

The main missions of the OPSV-1500 are: Coastal and offshore patrol; Search and Rescue (SAR); Support of diving & salvage operations; Replenishment of ships at harbour; Logistic support; Mine laying; Torpedo recovery and target towing.



### Naval Training Ship (MBH1773)

The MBH1773 class Training Ship is a monohull vessel that has been designed for the long-term on-board training of cadets. It is equipped with every aspect of a real training ship and conforms to all naval norms/standards and classification rules.

The MBH1773-class Training Ship's main roles, with the capabilities carried on board are: To accommodate 60 cadets and their trainers, providing long-term open seas training; To show flags all around the world; To serve as helicopter landing/take-off training platform and to carry out Command & Control Ship tasks in wartime.





### Submarine Deep Rescue Ship (MOSHIP-TR1)

The MOSHIP-TR1 is a monohull vessel that is designed to perform subsea and surface rescue missions in heavy seas. It is equipped with a redundant diesel-electric propulsion system, allowing flexible power share and strong position keeping, while conforming to all naval norms/standards and classification rules. Installed with deep rescue equipment/systems, the MOSHIP-TR1's main roles are: To provide life support to the crews of damaged submarines; To carry out submarine rescue (up to 600m in depth ) in a maximum of 72 hours; To handle rescue and salvage operations for surface ships and to provide subsea repair works and wreck removal.



### Offshore Rescue / Towing Ship (RTR-128)

The RTR-128 Rescue/Towing Ship is a monohull vessel that is designed to perform subsea and surface rescue missions in heavy seas. It is equipped with a conventional all diesel-CPP propulsion system, with strong position keeping capability, and conforms to all naval norms/standards and classification rules. RTR-128 is also equipped with the necessary installed rescue equipment/systems.

## COAST GUARD BOATS AND PATROL BOATS



### ARES 53 Ghost Patrol (Fast Patrol & Interceptor)

**LOA:** 16.30m  
**Beam:** 4.30m  
**Draft Construction Material:** Advanced Composites  
**Hull Type:** Mono - Deep V Planning  
**Propulsion:** Alternative 1: Twin 847 kW CAT C18 Acert  
Alternative 2: Twin 895 kW MTU 8V 2000 M93  
**Speed:** 60+ knots  
**Range:** 360nm  
**Crew:** 5 (+11 in mission)





### ARES 100 Hercules (Coastal Patrol & Fast Attack Craft)

**LOA:** 30.70m  
**Beam:** 6.14m  
**Depth:** 3.80m  
**Draft:** App. 1.2m  
**Construction Material:** Advanced Composites or Aluminium  
**Hull Type:** Mono - Deep V Planning  
**Propulsion Alternatives (Both alternatives with ZF 3060 Gear Boxes):** 1) Twin CAT 12 Acert with KaMeWa WaterJets 2) Twin MTU 16V 2000 M93 with KaMeWa WaterJets  
**Speed:** Up to 46 knots  
**Range:** 600nm (At economy speed)  
**Crew:** 12 (+ 38 troops).



### ARES 44 Cpb-N (Multi-Purpose / Inshore Patrol Craft)

**LOA:** 13.35 – 14.00m  
**Beam:** 3.96 – 4.30m  
**Construction Material:** Advanced Composites  
**Hull Type:** Mono - Deep V Planning  
**Engines:** Inboard Twin Diesels 900-2,200hp (Total)  
**Drives:** Conventional Shaft, Waterjet, Surface Piercing  
**Speed:** Up to 60 knots  
**Range:** 250nm+.



### New Type Patrol Boat

**LOA:** 56.90m  
**Width:** 8.90m  
**Displacement:** 395 tonne (Full)  
**Draft:** 2.65m (Full)  
**Class:** Turkish Lloyd: High Speed + 1as + M Patrol Boat  
**Speed (Cruise):** 14 knots (Sea State 4 – At Full Displacement)  
**Speed (Max. Cont.):** 22 knots (At Full Displacement)  
**Speed (Max):** 25 knots (Sea State 2 – At Full Displacement)  
**Crew:** 34  
**Engines:** 2 MTU 16V4000M90 – 2 Shaft Fixed Propeller  
**Range:** 1,000nm at 14 knots.







### SNR-SAR (Search and Rescue)

The SNR-SAR can play a major role in ensuring the safety of shipping, as well as in the preservation of the marine environment. The vessels can also be used to target illegal drug trafficking, provide safety at sea, carry out S&R missions and tackle piracy and terrorist activity.



### SNR-SOC (Special Operations Craft)

The SNR-SOC is a multifunctional fast transfer craft, built for naval forces. The primary role of the SNR-SOC is as a medium-range insertion and extraction platform for Special Operations Forces into a low- to medium-threat environment. As a secondary mission, the craft can be used for limited Coastal Patrol and interdiction, specifically limited duration patrols and low- to medium threat coastal interdiction.



### Onuk MRTP16®

**LOA:** 17.75m  
**Beam:** 4.19 m  
**Draught (Still/At Speed):** 1.20m/0.90m

#### Operational Characteristics

**Maximum Speed, (At Full Load):** 60+ knots  
**Propulsion:** Diesels, 2 x 895 kW  
**Drive System:** Twin Disc ASD12 B1L

**Export Countries:** Malaysia and the UAE.



## COAST GUARD BOATS AND PATROL BOATS



### Onuk MRTP20®

In service with the Turkish Coast Guard and export countries.

**LOA:** 22.55m

**Beam:** 4.76m

**Draught (Still/At Speed):** 1.30m/ 0.90m

#### Operational Characteristics

**Maximum Speed, (At Full Load):** 60+ knots  
(Up to 75 knots depending on engine selection/configuration)

**Export Countries:** Georgia.



### Onuk MRTP33®

In service with the Turkish Coast Guard and export countries.

**LOA:** 35.60m

**Beam:** 6.70m

**Draught:** 1.40m

#### Operational Characteristics

**Maximum Speed, (at full load):** 45+ knots

**Propulsion:** Diesels, 2 x 2,720 kW – 2 x 4,000 kW

**Drive System:** MJP Water Jets

2 x MJP 753DD or 850

**Range (Economical):** 850 nautical miles  
(at 33 knots)

**Export Countries:** Georgia and Pakistan.



## UNMANNED NAVAL VEHICLES



### Barbaros AUV

Barbaros Autonomous Underwater Vehicle (AUV) is launched from its host platform, most likely a surface ship, but possibly a submarine, aircraft, USV or shore facility.

The Barbaros AUV then proceeds to the designated observation area. Once it reaches its operating area, it performs the mission, collecting information over a predetermined period of time; autonomously repositions itself as necessary, both to collect additional information and to avoid threats; and provides a persistent presence in the operating area, gathering data for long time periods, perhaps as long as several weeks.

**Length:** <2.5m

**Width:** <0.5m

**Height:** <0.5m

**Depth Rating:** 300m

**Max. Range:** 50km @ 2 knots



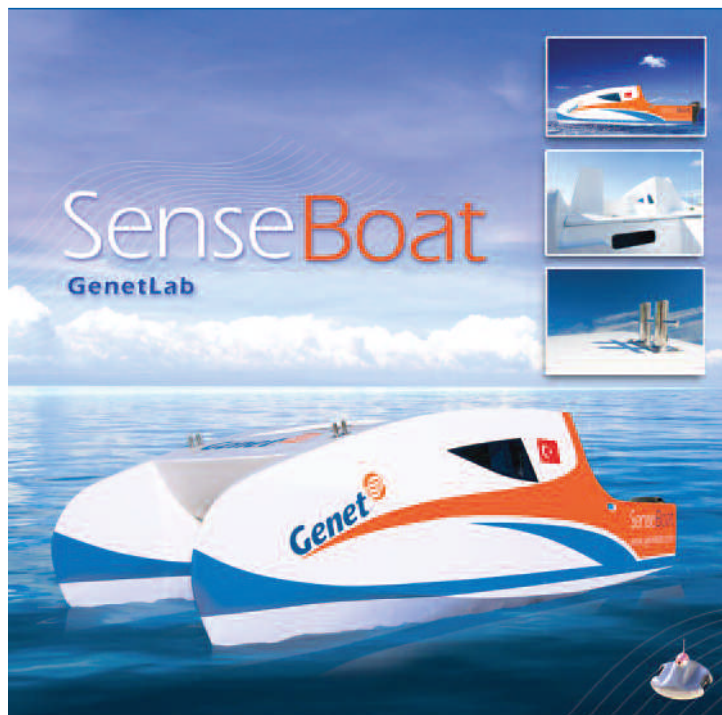
**Forward Speed:** 3 knots

**Thrust:** 1x Horizontal Thruster, 4 x Rudder Blades

**Cameras:** 1x Colour CCD, 1x Monochrome CCD

**Navigation:** 1x Forward Looking Imaging Sonar, 1x AHRS, 1x

Altimeter, 1 x USBL



### SADAS – Mobile Underwater Surveillance System and Unmanned Naval Vehicle - SenseBoat

SADAS has been designed to provide temporary underwater security in areas like ports, gulfs and strait entrances, or in much wider and deep waters. In this system, the nodes float on the water's surface, and sensor clusters can be dangled to adjust their depth. The nodes can be deployed from ships or air vehicles, or deployed and collected by a SenseBoat in a short period of time.

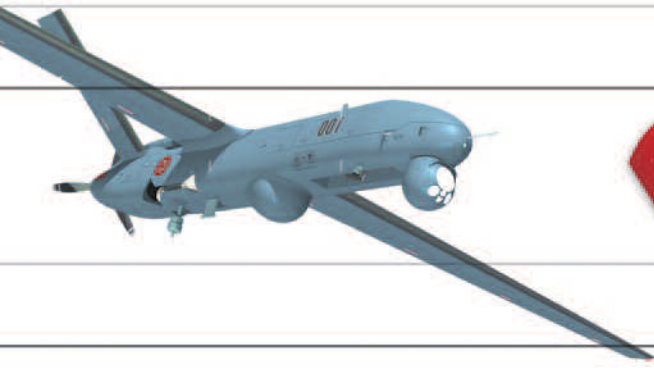
SADAS has civil as well as military applications, such as underwater security or monitoring temporary bases, or trade ships sailing in dangerous waters.



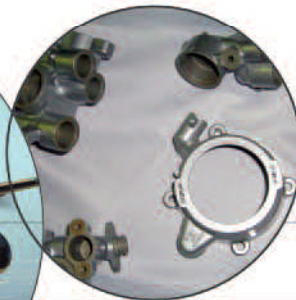
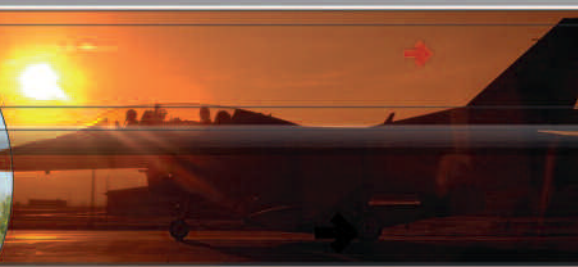
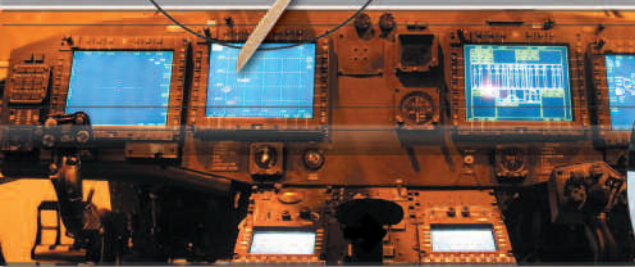
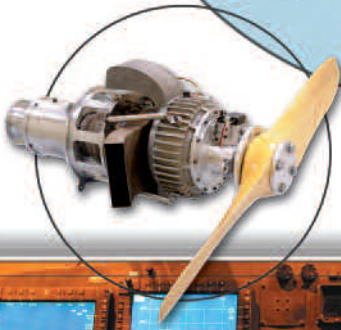
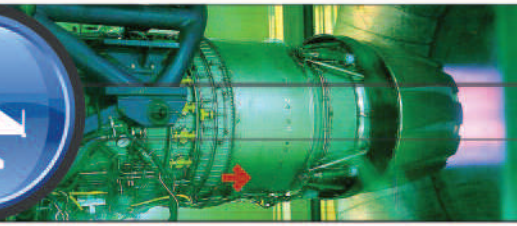
### Globida Mini Unmanned Naval Vehicle

<b>Speed:</b>	Max 40 kts
<b>Impermeability:</b>	IP 67
<b>Duration:</b>	Min 3 hours
<b>Stabilization:</b>	Yes
<b>Mission Loads:</b>	ELINT, Radar, EO, Light Machine Gun
<b>Control:</b>	Ship or Shore Radio Link
<b>Image TX:</b>	Real-Time
<b>Multi Vehicle Control:</b>	3 vehicles from one control system, autonomous or manual
<b>Launch Platform:</b>	Shore or Ship
<b>Autopilot:</b>	GPS supported





# AEROSPACE







### F-16 Modernization

TAI is ready to meet the modernization/upgrade requirements of countries with F-16s in service. The Falcon-up, Falcon Star and MLU modifications of a total of 17 Block 15 of the Royal Jordanian Air Force (RJAF) F-16s are being performed by TAI. The PO-III program of the TuAF includes the prototype development and verification processes of a total of 10 TuAF F-16s in three different blocks and the Serial Modernization of a total of 149 F-16C/D Block 40 and 50 aircraft as well as the manufacture of fully-verified modification kits. TAI also contracted for the modernization of 42 Pakistan Air Force F-16 aircraft.



### T-38 Avionics Modernization (ARI)

A total of 55 TuAF T-38A aircraft are to be upgraded under the ARI program, which will be carried out under the prime contractorship of TAI. During the Prototype Phase, the modification of five aircraft will be performed at TAI facilities. The remaining 50 production aircraft will be modified at TuAF 1st Air Supply and Maintenance Center as part of Serial Production Phase.



### C-130 Avionics Modernization (Erciyes)

Under the program, the avionics modernization of a total of 13 TuAF C-130B/E aircraft will be realized. Being the prime contractor of the Erciyes program, TAI, will complete the modernization of two prototype aircraft, and oversee the modernization of the remaining 11 aircraft at TuAF 2nd Air Supply and Maintenance Center.



### S-70 Modernization (YARASA)

YARASA is a development, modernization and systems integration program, implemented in two phases, for a total of four S-70 Black Hawk Helicopters in the inventory of the Turkish Armed Forces. TAI is the prime contractor for the SSM. The program comprises Auxiliary Fuel Tank Integration (AFTI) and Avionics Integration (AVINT) phases. AVINT phase, comprises system development, avionics system integration and the re-design and formation of both structural and electronic infrastructure of S-70 Black Hawk helicopters.



### Turkish Primary And Basic Trainer Aircraft (HÜRKUŞ)

Under the Turkish Primary and Basic Trainer Aircraft (HÜRKUŞ) program; the design, development, testing, verification, manufacturing and civil certification of an indigenous training aircraft is going to be performed. HÜRKUŞ will be designed and certified in accordance with EASA CS 23 standard.

HÜRKUŞ is going to have night and day mission capability, tandem seating and a single turboprop engine. With this aircraft, general purpose, instrument flight, navigation and formation training phases will be realized. In order to realize these training stages; the aircraft shall have the standard aircraft systems, cabin pressurization, escape system, oxygen system.

**Technical Specifications:****Cruise Speed:** > 250 kts**Maximum Speed:** 311 kts**Take-off Weight:** 3,000kg**Engine Power:** 1,600hp**G Limits:** +7G / -3.5G**Climb:** 15,000ft in 5 min.**Seating Configuration:** Stepped Tandem**Pressurization:** Yes**Anti-G System:** Yes**OBOGS:** Yes**O/O Ejection Seat:** Yes**Avionics:** All Digital.

## HELICOPTERS

### ATAK Programme

As a result of the aim of providing the Turkish Land Forces [TLFC] with a Attack/Tactical Reconnaissance helicopter capability, TAI will produce and customize according to user needs, a total of 51 platforms with 41 options, as well as provide integrated logistics support, in the ATAK Helicopter Programme.

Under the role of Prime Contractor TAI, will be the sole source for the airframe for the global market place, as well as the owner of the propriety rights for the particular configuration, while also performing final assembly and flight operations. TAI additionally holds the world-wide marketing rights of the helicopter, excluding only Italy and the UK.





### Baykar Makina



#### Mini UAV

Bayraktar Mini UAV Systems have been designed and manufactured by the Kale/Baykar Partnership with the maximum use of local infrastructure and capabilities. Each System comprises: Four Bayraktar Mini UAV platforms, Two Ground Control Stations, Two Data Terminals, Four CCD or CMOS Colour Day Cameras and Two IR Night Cameras. Powered by two electric engines, the Bayraktar Mini UAV can operate at a distance of up to 15km and loiter over the target area for almost 60 minutes. Equipped with an INS/GPS-aided navigation system, the air vehicle can climb to 12,000ft, but its operational altitude is 2,000ft.



#### Unmanned Aerial Vehicle (Globlet)

The Globlet mini UAV, provides its operators instant reconnaissance capability together with video and telemetry data by its unique software interface and Real Time Control hardware in 15km range and 1,5 hrs flight endurance. With minimal training even unexperienced operator can control all the stages of mission under difficult weather conditions by day and by night. At the end of the mission Globlet returns to its preprogrammed recovery point by landing on its strong body without any damage to its payload.

**Wingspan:** 1,510mm  
**Length:** 1,400mm  
**Weight:** 3.1kg  
**Data Transmission Range:** 15km  
**Endurance:** 75 Minutes

**Cruise Speed:** 65km/h  
**Max. Speed:** 110km/h  
**Mission Altitude:** 150-1,500ft  
**Propulsion:** Electrical  
**Battery:** Rechargeable Li-Polymer Battery



#### Turkish Indigenous MALE UAV – TIHA

The TIHA Programme includes the development of an indigenous prototype Medium Altitude Long Endurance (MALE) Unmanned Aerial Vehicle (UAV) to meet the requirements of the Turkish Armed Forces (TAF) for surveillance and reconnaissance. The system is to be completely designed by Turkish engineers working on the programme. The TIHA system under development will be dedicated to surveillance, reconnaissance, fixed-and-moving target detection, identification, classification, tracking and real time data/image transfer missions.

### Remotely Controlled Target Drones (Turna and Keklik)

Two types of target drones, as well as their launchers and ground equipment, were designed and produced to meet the firing/target tracking requirements of the Turkish Armed Forces (TAF) artillery units. The development of the Firing Target Drone 'Turna' and the Tracking Target Drone 'Keklik', the first Turkish designed and produced target drones in the inventory of TAF, continues. TAI's Standard Target Drone System - Turna/S has proven its operational flexibility, low risk and cost effectivity with live firings in real operational environment. With the accumulated experience and feedback from the user, a new generation aerial target system, designated Turna/G has been developed. Turna/G, can not only autonomously operate beyond visual range, but also track pre-defined courses, can also be monitored and commanded through a ground control station.



### VESTEL

### Efe UAV System

The Efe UAV System is designed for day and night Surveillance, Target Acquisition and Reconnaissance, Target Recognition and Identification missions. Efe System can be operated real time from ground operator and can perform (pre)programmed missions. Efe System can display real time sensor data on ground station up to 12km for 1,5 hours. Efe UAV is capable of flying fully autonomously, as well operator can fly it with assist of the autopilot. Very easy hand launching, belly landing and parachute landing on difficult ground makes Efe System operational at any place. One Efe System consist of 1 UAV, 1 Ground Station, 1 Ground Data Terminal, a Day Time Payload, 1 Infrared Payload, 1 Spare Parts Set. These equipment is carried in a ruggedized backpack.



### Karayel UAV System

The Karayel Tactical UAV System is designed for Surveillance, Target Acquisition and Reconnaissance, Target Recognition and Identification missions. Long mission endurance with 10 hours and high operational altitude with 18,000 feet makes it very attractive in its class. Retractable landing gears not only increase the flight performance but also clear the payload view. Karayel has a capability of 150km video data transfer range. Karayel carries a Stabilized Gimbal with Day Sensor, IR Night Sensor, LD (Laser Designator) and LP (Laser Pointer). Karayel can take-off, operate and land autonomously and in harsh environment, a catapult take-off and steerable parachute landing is optional.

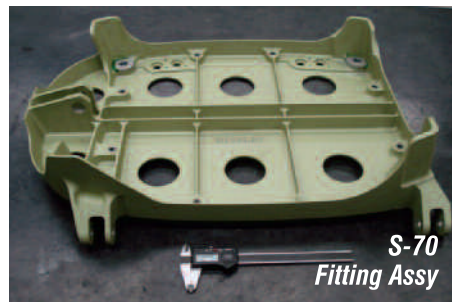
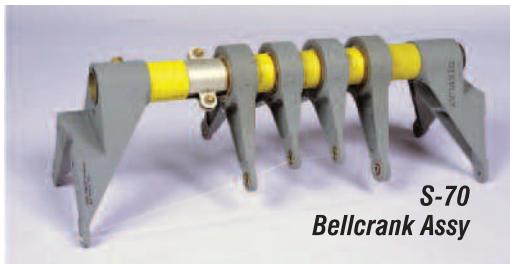




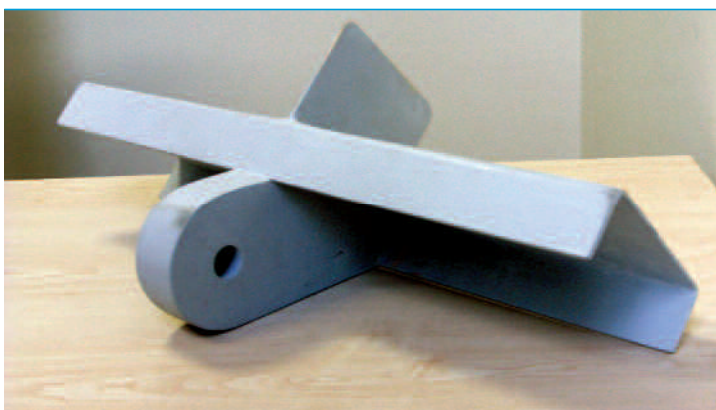
### Alp Aviation



Alp Aviation is a significant supplier of flight control assemblies, airframe components and tail rotor drive shafts for Sikorsky's Black Hawk, Sea Hawk and S-76 platforms, and is qualified as the only non-US flight safety parts supplier source for Sikorsky. Alp Aviation also supports several US and International programmes, including the F-35, F135, F-22, A380 and Boeing 787.



### ATARD



#### Ailerons

The wings of new generation military transport aircraft like A400M and now also the fuselages of new generation commercial aircraft like Airbus A350 and Boeing 787 are mainly made up of composite materials. With KEKKE-ÜRTEGE a new, single-step, cost-effective production method is being developed to co-manufacture the spar of the ailerons used on commercial aircraft like Airbus A320 and Boeing 737 along with their ribs and fittings. Ailerons, spoilers, tail planes, elevators, rudders of almost all modern aircraft are made up of composite materials.



### A400M

TAI acts as the lead National Industry Representative for Turkey, in the design and development of the A400M programme. In partnership with Airbus Military SL in keeping with the 10 A400M LoadMaster aircraft slated for Turkey, the Turkish Aerospace Industries is responsible for design, development and production of various structural parts and systems. The structural work packages include forward-center fuselage, ailerons and spoilers, paratroop doors and the emergency exit door, hatches, tail cone, rear fuselage 'section A' upper shell, whereas systems work packages include lighting and water/waste systems.



### Maintenance, Repair and Overhaul (MRO)

TEI is one of the largest engine MRO centres in Turkey, for both fixed and rotary wing platforms. The company provides MRO services for the Makila 1A1, CT7 and TF33-PW-100A engines, as well as components, as well as engine module repairs to condition, inspection and repair programmes in the context of the Engine Structural Integrity Programme (ENSIP) for F110-GE-100/129 Engines.



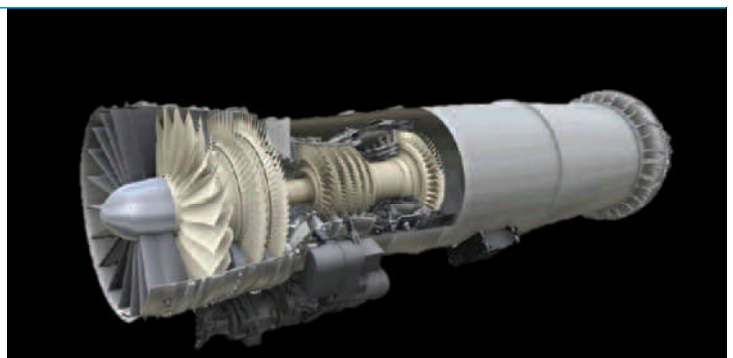
### A400M-TP400 Engine Components

TEI participates in the TP400 engine project, to power the A400M military transport, as a risk and revenue sharing partner, and is sole source for the modules under its responsibility.



### Joint Strike Fighter (JSF) F136 Engine

TEI, provides parts manufacturing, engineering and all engine-related activities, starting from System Development Phase, integrating Turkish aerospace capabilities with the world under the Joint Strike Fighter (JSF) F136 Engine Programme.





#### Airworthiness Certification Services (ACSS)

STM has been tasked by the Turkish Ministry of National Defence (MoND) to establish the local technical infrastructure in order to initiate and maintain the National Airworthiness Certification activities of the country's military aircraft.

Airworthiness Certification Services include:  
Preparation of contract clauses; Determination of certification basis; Tailoring of airworthiness requirements; Establishing the means of compliance; Evaluation of design and product organizations.





# aselsan



## Kalkan (Shield) Air Defence Early Warning Radar

The Aselsan, Air Defence Early Warning Radar is a 3-D short-to-medium range search and track radar for fast and accurate detection of low altitude air targets, ideal for the local defence of critical military and industrial assets, such as bases, harbours and factories. It can classify targets as fixed or rotary wing and as friend or foe with integrated IFF.



## TRS 22XX

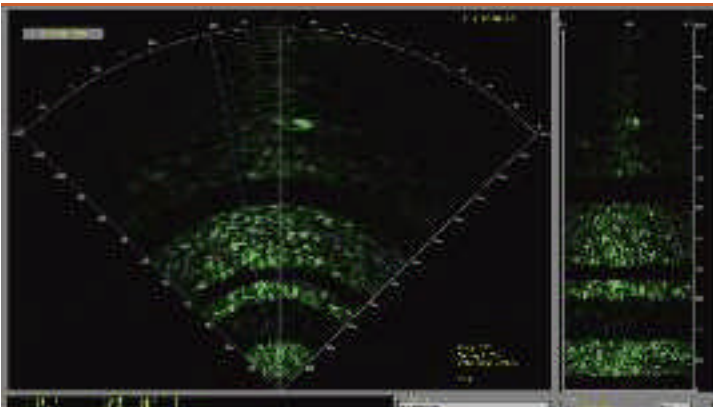
The TRS 22XX is a 3-D air defence radar complying with the NATO Class I specifications. It is designed for efficient operation even through the most hostile environment of various and simultaneous clutters, heavy jamming, blast and battle conditions.

### Operational Features:

- **Detection Performance:** Range 470km, Elevation angle 20°, Ceiling 100,000ft
- **Accuracy:** Range 50m, Azimuth 0.25°, Altitude 2,000ft
- **Resolution:** Range 120m, Azimuth 2.5°.



Koç Bilgi ve Savunma Teknolojileri A.Ş.



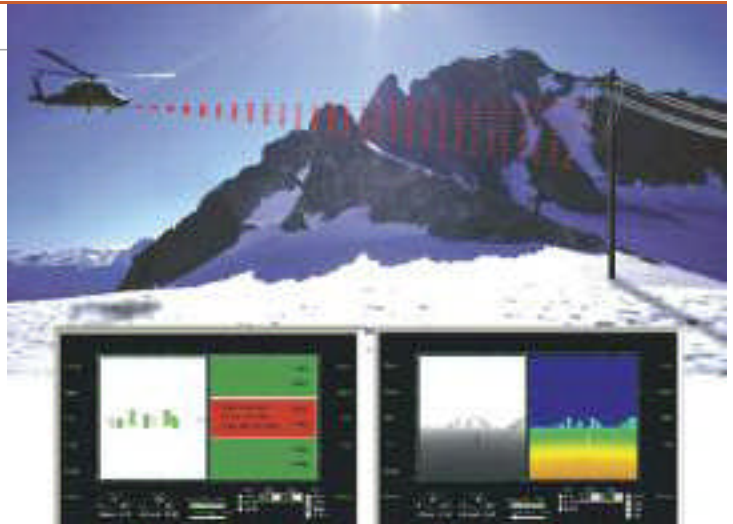
## KS-D 1 (P) DDS

The Diver Detection Sonar (DDS) is the first to be completely designed and manufactured in Turkey. Initially designed for Microsoft environments, it comes with the benefit of portability and the ability to be installed and run on a Notebook or a PC. The system gives the operator complete control over the User Interface, and has the ability to work in four different ranges.



### Helicopter Obstacle Detection System (HODS)

The Helicopter Obstacle Detection System is designed to improve flight safety through situation awareness against obstacles such as power and telephone lines or pylons. The system uses a narrow eye-safe laser beam to scan the field of view in the direction of flight, or at an offset selected by the operator. Detected obstacles are classified according to type (wire, pole or extended structure) and criticality (distance, route and the speed of approach), and are displayed over a synthetically-formed image of the terrain. Alerts and monitoring of risk against collision are provided through a video and audio interface available on board.



### Millimetre Wave Radar (MMWR)

Meteksan is developing millimetre wave radar techniques and a radar prototype to be deployed on tactical and reconnaissance helicopters. The system will perform ground and air target detection & classification, target tracking and target engagement capabilities for attack helicopters using Pulse Doppler, SAR/ISAR and various terrain profiling techniques in the Ka band, determined through simulations and test analysis.

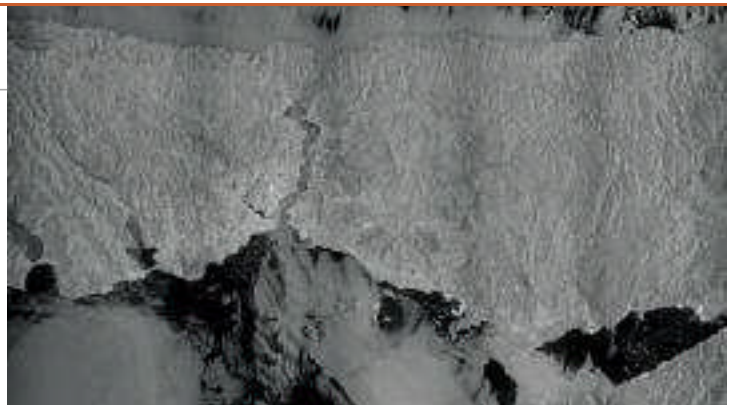


### Synthetic Aperture Radar (SAR) Technologies and Applications

SDT, in cooperation with Aselsan, was awarded an R&D contract by the SSM/TuBİTAK for the design and development of two Synthetic Aperture Radar (SAR) prototypes for Turkish Air Force (TuAF). Project is scheduled to be completed in 54 months.

SDT Workshare:

- Signal Processing (SAR Strip-map mode SW and SAR Spotlight mode SW)
  - SAR System Modelling
  - Data Recording Device Design.



### aselsan



#### ASELFLIR-300T Airborne FLIR

The ASELFLIR-300T system is a lightweight, multipurpose, thermal imaging sensor for pilotage/navigation, surveillance, search-and-rescue, automatic tracking, target classification and targeting. With a flexible hardware and software design architecture, they can be used on different platforms ranging from rotary wing, fixed wing and unmanned air vehicles to naval ships.



#### Python/Boa Thermal Weapon Sight

Aselsan's Python/Boa Thermal Weapon Sight is a lightweight, ruggedised, 384 x 288 VOx Focal Plane Array uncooled thermal sight, operating in the long wave spectral band. In addition to day and night, Python/Boa can discriminate targets in adverse weather conditions, and can operate in total darkness without shut down or bloom when hit by direct light. It can be used for fire control on individual/crew-served weapons, or in other observation or surveillance applications.

### Genet



#### SenseNode® - Genetlab® Sensor Node

SenseNode® is a wireless sensor network node developed by Genetlab® that comprises three main components: Sensor-L or Sensor-N, for land and naval use, respectively. This is the sensing module of SenseNode®, and is a generic sensor unit that can be modified with the addition or removal of sensors, according to the requirements of the specific application. Node-RF is the processing and RF module of SenseNode®, Home is the SenseNode® case. There are three types of home, each of which can be dropped from aircraft, and can be partially buried in the ground. Others can be scattered by throwing.



#### BODAS® – Sensor Network System for Pipeline Security

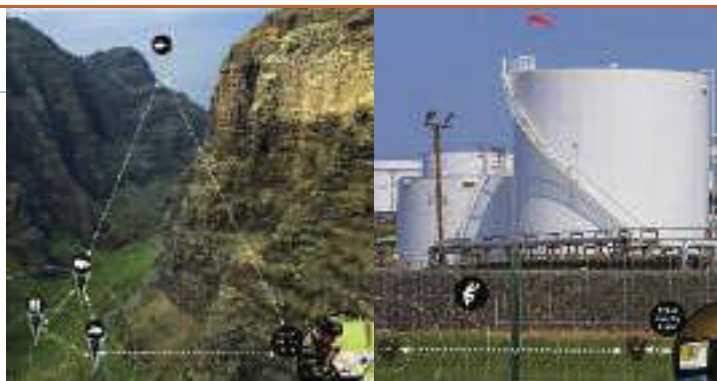
Genet BODAS® uses Line-nodes to detect and localise threats to the safety and security of pipelines. Line-nodes are deployed on average every 100m along a pipeline, at a maximum of 1m distance. In a wireless Genet BODAS® network, the Line-nodes pre-processes signals from their geophones, which are buried in the soil at a depth of 0.3–1 metre. If any state of alarm is detected, they transmit immediately the alarm-data via a RF transmitter to the sink-node through multiple wireless hops.





### TEDAS® – Sensor Network System for Intrusion Detection

TEDAS® is a next generation sensor network system designed for intrusion detection applications along the perimeter of important facilities in a robust, practical, reliable and cost effective solution. TEDAS® can be installed on any kind of fence.



### SPOT 5

Satellite imagery with 2.5m through 20m spatial resolution can be provided to various location accuracy levels according to customer demand.

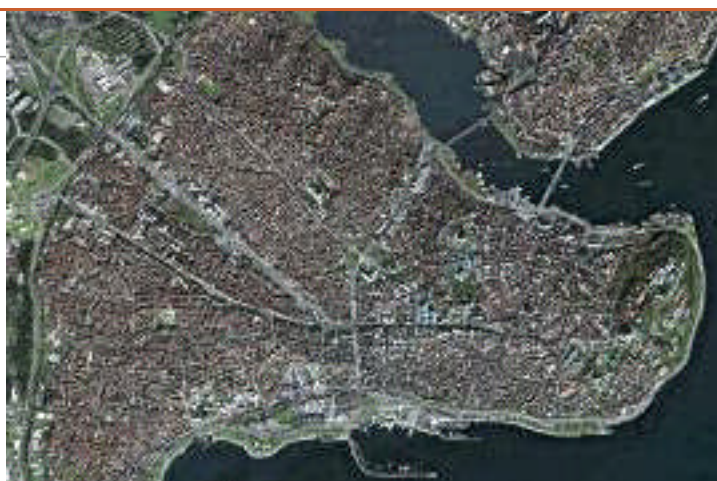
**Spatial Resolution:** 2.5–20m Panchromatic & Multispectral

Mono & Stereo Collection Capability

**Location Accuracy:** 10–30m RMSE

**Radiometric Resolution:** 8 bit

**Spectral Resolution:** Panchromatic (Black & White)  
5-Band Multispectral (R, G, B, NIR and SWIR)



### Optronic Equipment

Transvaro has delivered night vision systems, thermal imagers and laser target pointers to the Turkish Armed Forces.

**Products:** Thermal Observation Systems, Thermal Weapon Sights, Night Vision Monocular Goggles, Night Vision Binoculars, Armoured Drivers Night Vision Periscopes, Long-Range, Night Observation Devices, Laser Target Pointers.

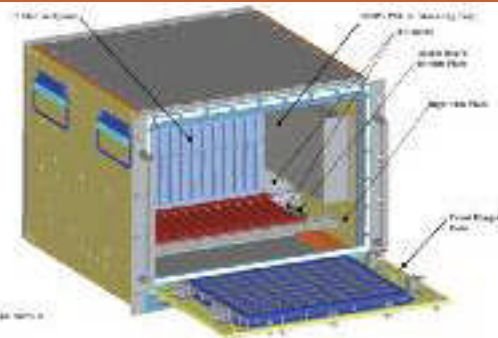


# aselsan



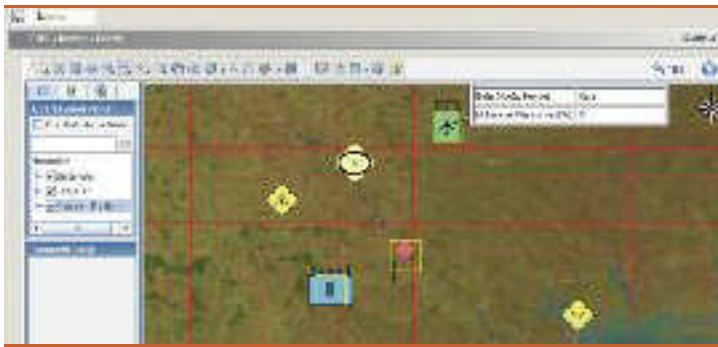
### Software Defined Networking Radios (SDNRs)

SDNRs are a high performance digital radio family, designed in V/UHF configurations to support ground, naval and airborne applications. Its software-configurable architecture enables the support of various tactical and professional radio waveforms and EPM techniques. SDNRs provide strategic long-range communications (HF), Combat Net Radio (CNR), Broad Band Packet Radio (BBPR), Narrow Band Packet Radio (NBPR) and Single Channel Radio Access (SCRA) functionalities.



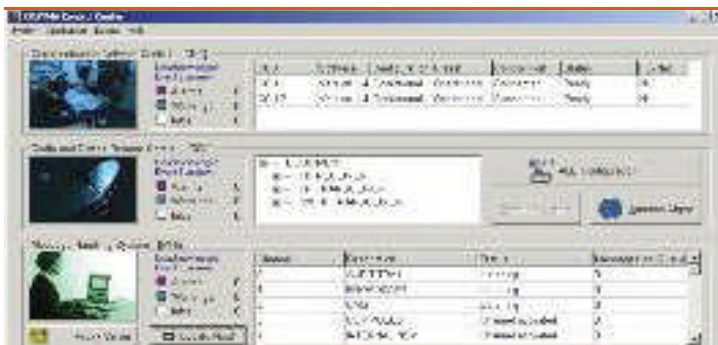
### X-Band EPM Modem for Secure Satellite Communication

C2Tech designs and develops secure military satellite communication systems compliant with NATO STANAGs for the Turkish Army. The X-Band EPM (Electromagnetic Protection Mode) Modem is fully compliant with NATO STANAG 4606 for interoperability in network environment and contingent coalition operations. The flexible system platform lends itself to the deployment of custom waveforms; while the modular software architecture design fosters system integration.



### Turkish Armed Forces Information System (TBS)

The company has been charged with the automation of the Turkish General Staff Headquarters, providing a system that is designed and developed in Turkey. To obtain the elements of data required for the planning or executing of military operations, an information exchange mechanism that encompasses all services (army, navy and air force) has been implemented.



### Military Message Handling System-2 (MEDAS-2)

The aim is to provide: Fast, secure, reliable, and uninterrupted military message exchange between users; remote user access to the system;

- automatic tracking of system hardware and software inventory; automatic patch tracking and software updates; automatic tracking of the services and applications included in the system;
- and backup and restoring of the system servers.



### MilSOFT Multi-Purpose Tactical Data Link System (Mil-DLP)

The MilSOFT Multi-Purpose Tactical Data Link System (Mil-DLP) provides a Data Link capability for the sharing of tactical information with other Link 16 and/or Link 11-capable naval, air, and land platforms.



## NORTEL NETAŞ

### Next Generation TASMUS-G System

The system enables the conversion of Tactical Area Communications System (TASMUS) networks into a structure with an IP backbone. In addition to System Access Point (SAP) and Mobile Subscriber Access Point (MSAP) switches, a Converged Access Switch (CAS) is being developed to allow IP/Ethernet/Gigabit Ethernet connections in the access network. Within this project, the MOLTU (Multiple Optical Line Terminating Unit) is being developed to allow the carrying of voice and data in TASMUS and similar networks through the Optical SDH network, which provides a safe carrying environment.



### Next Generation APCO-2 System

Providing the system with ISSI (Inter Radio Frequency Subsystem Interface), Simulcast, and APCO VoIP Console structure. ISSI is the operation of multiple APCO systems as a single system by way of interconnection. Simulcast is the operation of radios and base stations over a single frequency instead of multiple frequencies, thus optimising the air frequency utilisation of the APCO system.





**Savronik A.Ş.**



### Satellite Ground Terminal System

Satellite Ground Terminal System integrated on a trailer is a portable system which transmits processed data to remote headquarters via satellite and is capable of transferring voice & data safely in X-Band.

#### Technical Specifications

**Operation Principle:** X-Band Satellite Communication

**Operating Frequency:** X-Band

**Data Rate:** Up to 16 Mbps

**Modulation Type:** BPSK (SS), BPSK, QPSK.

**SELEX**  
Communications



### Systems for Land & Naval Platforms

TURMA	HF / VHF FM Tactical Combat Net Radio
H4855 PRR	Personal Role Radio - PRR
SP 2295/R	HF-SSB Digital Receiver
SP 2296	125 W HF-SSB Transceiver
SRT-601	400 W HF-SSB Transceiver
SRT-2007	1 kW HF-SSB Transmitter
ST-5000	5 kW HF-SSB Transmitter
ST 10085	10 kW HF-SSB Transmitter
RT 619/NV	V/UHF AM-FM Transceiver
RALM 02	Laser Warning Receivers for Land & Naval Platforms.



### Systems for Air Platforms

SRT (170, 270, 470)/DR HF Airborne Transceiver  
Family for Air Platforms  
Display, Control Panel, Human Machine Interfaces  
Lighting Systems for Air Platforms  
Lighting System: NVIS compatible lighting system for rotary and fixed-wing airborne platforms  
Cockpit and Control Panels: NVIS compatible Type VII cockpit and control panels for Airborne platforms.



### Systems for Civil Applications

**ELETTRA:** SELEX TETRA Products

**Simulcast:** Wide Area Coverage Radio Systems

**GSM-R:** GSM Solutions for the Railways

**ATC Systems:** Ground to Air Communication Systems  
Automatic License Plate Reading System.



### SRC155A

The SRC155A series of point-to-point digital radios deliver highly flexible and reliable solutions for n x E1 (up to 64 x E1) in PDH and STM-1 in SDH hierarchies. The operating frequency bands are 7, 8 and 10.5 GHz (ITU). The

SRC155A provides:

- Software-select data capacity, modulation type, RF channel frequency, protection mode, output RF power and test facilities for operator requirements.
- By means of the plug-and-play modules make it highly agile and scalable radio. Service providers can change the system architecture that meets current requirements, and then adapt their networks to accommodate new applications.



### SIR

SIR is an encrypted USB flash memory storage device which protects data, fulfilling the security requirements on a full hardware-based architecture that is operated by a single user. The device has the storage capacity options of 2GB/4GB/8GB flash memory, with writing and reading speeds of 10MB/s.

The device protects data stored on itself, not while reading from or writing to the host. Data security and device/user authentication requirements are provided by means of a user token and a user password.



### Crypto Mobile Phone

The UEKAE crypto mobile phone provides end-to-end secure communications.

Since the GSM network has serious security flaws, TÜBİTAK UEKAE designed the 'UEKAE - Crypto Mobile Phone' with the following features:

- Voice/data hardware based encryption for end-to-end secure communications through the GSM network, and
  - Interoperability with NATO SCIP (Secure Communications Interoperability Protocol)-compatible devices.

NATO Stock No: 5805-27-042-9041





### Digital Data Recorder (DDR)

SDT-DDR is a system for military platforms for the recording of data from digital/analogue video/audio interfaces, military and commercial data buses and all type of digital data over serial/parallel data ports, with very low power consumption and in harsh environments.

With a flexible and customisable modular structure, the DDR presents different alternatives for adopting to different platforms and environments.



### Tactical Environment Software (TES)

Developed for tactical level military training needs, the TES is a simulation software that allows tactical scenario planning, running, after training evaluation and debriefing.

SDT TES presents a realistic and interactive tactical environment for training simulators through the physical simulation of ground, airborne and maritime elements of the battlefield, as well as their systems, behaviour and effects of the environment.



### Mission Support System (MSS)

Mission Support Systems (MSS) are avionics that can be installed on airborne platforms to run all the digital moving map and similar software that a pilot might need. Images are transferred to the pilot in the form of analogue video data generated by the mission software, which is transferred to the MFD through the MSS. The MSS also has the capability to store data that might be transferred from digital interfaces during the entire flight up until the end of the mission.



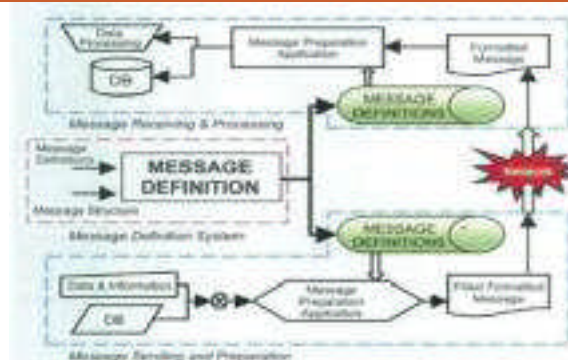
### Mission Management and Support System (MMSS)

MMSS provides real time computer support to pilots making operational decisions related with mission planning, mission rehearsal, mission execution and mission debriefing. MMSS has a modular hardware and software architecture, and can be adapted for any kind of aircraft, and comprises a Data Preparation Station (DPS), Mission Planning Station (MPS), Transportable Mission Planning Station (TMPS), Air Unit Computer (AUC) and Data Transferring Device (DTD).



### Message Formatting System

Using the Message Formatting System, all strategic level Headquarters messages can be formatted in accordance with NATO ADatP-3 procedures and linked with databases. The exchange of messages in an electronic media can also be achieved successfully.



### Strategic-Level Command Control and Information System (CCIS)

CCIS is a strategic level Command & Control Information System based on open software architecture to allow future extensions. CCIS includes:

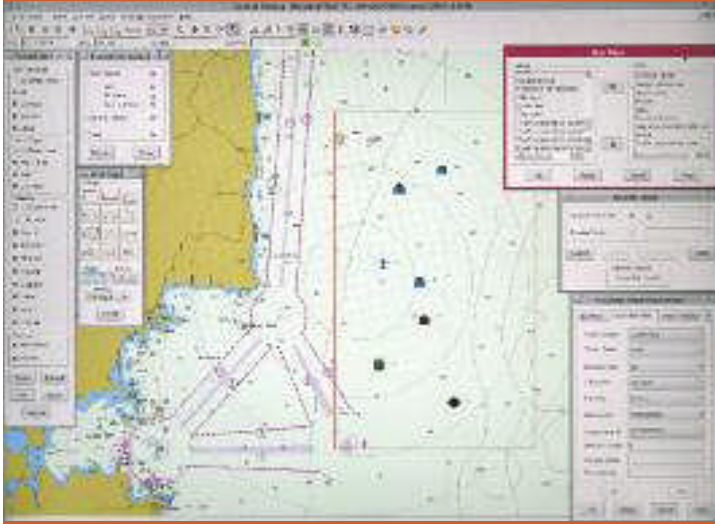
- Legacy systems and database applications
- Information flow and interoperability
- GIS applications (Force wide GIS repository containing tactical level raster/vector maps and air/satellite images)
- Electronic Warfare planning functions.



### Tank Command Control and Information System (TCCIS)

TCCIS provides continuous, secure and safe data communications from single tank to battalion task force level, to serve for effective command and control requirements of the Turkish Army. Capabilities: Planning, execution, monitoring and control of mission functions, from a single tank to a battalion task force level; Situational Awareness through a near real-time common tactical picture on digital maps; Inter-vehicular and intra-vehicular data communication and Mission rehearsal and post-mission review (Briefing/Debriefing).





### Moving Map

AYESAŞ developed DO-178B certifiable Atlas Avionics Moving Map and DO-200A compliant Map Preparation Software for fixed and rotary-wing aircrafts. The moving map architecture is designed to be fully extensible for Raster Image Support (VFR, IFR, Approach Charts, Topographic Maps, Aerial Imagery etc.), ARINC 424 Navigation Layer, Geographic Layers (Vectorial and Terrain), Flight Plan Support, 2-D/3-D Rendering, Slope Shading, Line of Sight (LoS) capability, Vertical Profile Display, 3-D TAWS Rendering.



### Console

AYESAŞ carries out electromechanical design, production, application software, system integration and lifetime maintenance support services for the military type rugged consoles. The references and projects realised in this scope are:

**TMRC:** Tactical Command and Control Consoles electromechanical design and production.

**Thales:** Submarine EW Console production.

**G-GSMP:** Operator, Tactical Command and Emergency Control Consoles electromechanical design and production.



### Cabinets

AYESAŞ carries out electromechanical design, production, application software, system integration and lifetime maintenance support services for military-type rugged cabinets. Rugged cabinets provide the physical environment for COTS equipment to withstand MIL-SPEC conditions, such as vibration, EMI. Projects realised in this field include:

**G-GSMP:** System Interface Unit Cabinets (SIUC) – electromechanical design and production.





**Savronik A.Ş.**

### BORA 2100 Fire Control System (T-122 Sakarya MLRS)

The Bora 2100 Fire Control System has an automatic targeting ability, offering complete control over every aspect of firing. The unit was designed and produced using only local means.

The system comprises the following units:

- Fire Control Computer
- Launcher Control System
- Vehicle Level Determination System
- Fire Control System.



### Power Distribution and Control Units

Our Power Distribution and Control Units are designed and produced for various platforms, including M113 Type Tracked Vehicles, Shelters, L-Rs etc. The System consists of a Power Distribution Unit and a Remote Control Unit.

All units are Micro Processor-Controlled and Communicate through a CAN Bus.



### Lighting Control Panel

The Lighting Control Panel allows the operator to control the white/red passenger compartment lighting (white/red selection, dimming) and the console instrument and panel lighting for the CN-235-100M MPA/MSA (Maritime Patrol Aircraft/Maritime Surveillance Aircraft).

The functionality of the CN-235-100M MPA/MSA (Maritime Patrol Aircraft / Maritime Surveillance Aircraft) interior illumination is to provide the crew with a suitable lighting environment in order to carry out their mission.



### Intervalometers

Intervalometers are fire control units that have been developed to launch rockets from various air platforms at ground targets. The fully electronic design allows high reliability and high longevity when compared to electro-mechanical designs.

SEI2000-1/2, SEI2019-1 Intervalometers developed to launch 2.75 inch rockets from air platforms to ground targets.

The SUU-25 Intervalometer is a fire control system to launch flares from F-4 and F-5 aircraft.





### Portable Chemical Warfare Agent Detector

The MAM CDET-06/02 has been designed by TüBİTAK MRC Materials Institute as a point detector for the detection of chemical warfare agents in the gaseous phase. The unit contains no radioactive source and does not need calibrating before use. The sensor system can detect the four different warfare gas groups without mode change.

#### Technical details

**Detection:** Can detect nerve (G), shock (CG), blood (AC), and blister (H) agents.

**Weight:** 2,100g

**Dimensions:** 12 x 24 x 6cm

**Power:** AC 220 V, 50 Hz, DC 12/24V

**Communication:** RS-232

#### Accessories;

- Headphones
- Rechargeable Li-ion spare battery (total 16h)
- Cables for charging batteries from different sources
- Long sample tube for hard to reach sampling points
- Extra air filters.

NATO Stock No: 6665270327404



ETMTS-1 is an advanced dual-sensor mine detection system developed by the TüBİTAK MRC Information Technologies Institute for the detection and identification of metallic and plastic mines. The system can be operated in military environmental conditions.

- |                     |  |                     |
|---------------------|--|---------------------|
| 1. Units:           | a. Back unit   | b. Interaction unit |
| 2. Sensor structure | c. Search head   | d. Scanning arm     |
| 3. Capabilities     | a. Multiple sensor   |                     |
|                     | a. Detection of metallic mines                                       |                     |
|                     | b. Detection of plastic mines  |                     |
|                     | c. Identification of buried objects                                  |                     |
| 4. User Interface   | a. Ergonomic structure   |                     |
|                     | b. Three-button usage  |                     |
|                     | c. Audio visual warning  |                     |
|                     | d. Determination of buried object precisely using visual information |                     |
|                     | e. Convenient audio visual user interface to interpret sensor data   |                     |
| 5. Other properties | a. Compatible with MIL STD 810F environmental standard               |                     |
|                     | b. Compatible with MIL STD 461E EMC-EMI standard.                    |                     |

NATO Stock No: 6665 27 0429426



### VESTEL

#### Operator Consoles

Operator Console (OpCon) for user interface functions in combat management system. OpCons provide basic user interface functions such as display, input and control devices. Additionally they are configurable depending on the selected operator role. OpCons are specifically designed for naval platforms that requires navy bonding directives and higher reliability. COTS-based design approach makes OpCon easy to maintain and open to growth. Its MIL-STD-1472F compliant ergonomic structure provides excellent comfort for operators even for extended hours.



### YALTES

#### Operator Consoles

Operator Consoles are ergonomic multi-function Human Interaction Equipment designed for the distribution architecture of Ship Combat Management Systems (CMS). They also provide environmental protection for integrated COTS equipment according to relevant military standards. OpCon provides multiple data entry, display and control devices and powerful computing facilities for CMS applications.

**User Interface:** Keyboard, Trackball, Quick Entry Pad, dual 20" LCD, protected keys, Joystick (option), TV-Radar Video Display & Record  
**Power:** 115 Volts, 60 Hz. UPS 1,500 VA 220 Volts, 50 Hz (option)  
**Dimensions (WxDxH):** ~ 80 x 130 x 160cm  
**Weight:** ~235kg.

*NATO Stock Code: NSN : 5895270368576*



#### Interface Cabinets

SIUC is a 19" rugged cabinet that is engineered to support subsystem integration onboard ships. SIUC ensures that the housed equipment are protected from severe conditions associated with a maritime environment.

SIUC, with its modular design technique, enables:

- A stable and rugged mechanical structure for protection against mass shock and vibration.
- Anti-heating and anti-condensing capability

**Cabinet Control:** Cabinet Control Software  
KVM Drawer (Optional)

**Outputs:** Connections via Modular connector panels (designed to customer requirements)

**Power:** Capacity 115 Volts, 60 Hz, 2,200 VA UPS

**Dimensions (WxDxH):** ~ 80 x 130 x 160cm

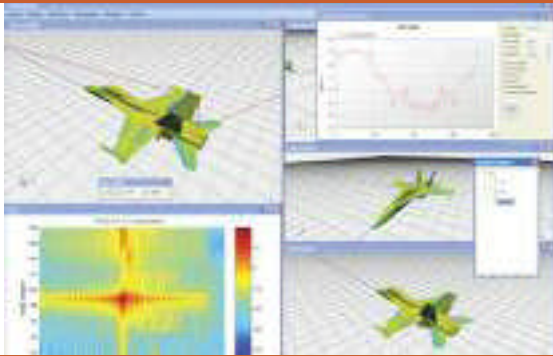
**Weight:** ~150kg (without payload).





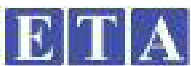
### Land-Based Active Air Defence Simulation System

System analyses the effectiveness of complex surface-to-air missile (SAM) air defence scenarios under various conditions, including the probability of kill and damage impacts of high-fidelity missile models.



### Radar Cross-Section Prediction Tool

The aim of this tool is to model and predict the radar cross-section performance of platforms, which will give an idea of the visibility and detectability of the platform by radar, under required frequency ranges and look-angles.

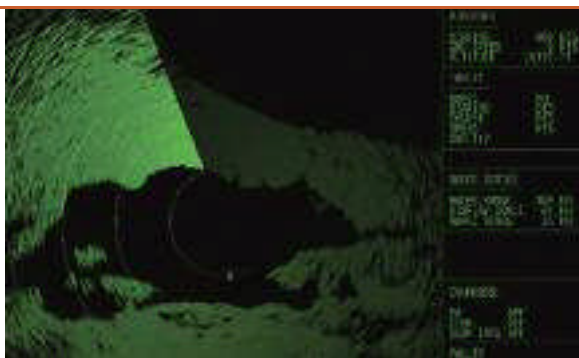


### SONOPES - Sonar Operator Training Simulator

The Sonar Operator Training Simulator simulates an acoustic environment to provide sonar operators and supervisors with a unique advanced training platform.

The training phases are;

- Underwater Acoustic and Basic Sonar Systems Training,
- Test and Evaluation,
- Introduction to Sonar Systems and Functions,
- Operation in a static environment,
- Tactical operation with real life scenarios.



### APS143 Sea Surveillance Radar Simulator

APS143 Sea Surveillance Radar Simulator system simulates the APS143(V)3 Radar System used in Sea Hawk and Black Hawk helicopters. The system can be integrated into full-flight simulators, or has capability to work standalone.

- Realistic mathematical modelling.
- Calculations and visualisations of clutter echo from land, sea and weather.
- Cultural objects (urban area, desert, etc) and surface material code (forest, rock, etc) support.
- High Fidelity Echo Display.

NATO Stock No: 7030270406930

TURKISH DEFENCE PRODUCTS GUIDE





### ATFS-400

ATFS-400 (Authentic Tactical Flight Simulator) provides a realistic training environment in real time, allowing aircrews to learn how to recognise and combat the effects of GLOC, a serious problem for high-performance aircraft pilots. The ATFS 400 combines high G-onset rates – up to 15G/sec, and the capability to generate sustained high G levels up to 25Ghz – with powered pitch and roll motion to take on the challenges of high G training and research.



### Gyrolab® GL-1500

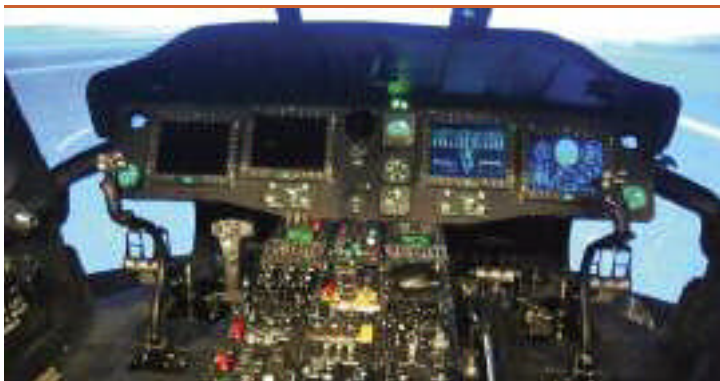
Gyrolab® GL-1500 provides four independent axes of simultaneous, continuous and reversible 360° motion, high fidelity cockpits, state-of-the-art visual displays and the ability to generate sustained Gs to provide the most effective Spatial Disorientation Training for aircrews. Realistic flight controls, flight instruments and collimated out-the-window display provide the pilot with a high fidelity learning environment.



### ADMS™

ADMS™ Advanced Disaster Management Simulator is an interactive virtual reality-based team training system that provides emergency responders with the opportunity to develop skills in the four C's: Command, Control, Coordination and Communication.





### Helicopter Simulators (HELSİM)

Havelsan is developing two Sikorsky S-70A-28D/DSAR Black Hawk and one S-70B Sea Hawk JAR STD 1H 030 Level D Full Flight Simulators and Full Mission Simulators, two Partial Mission Simulators, two Training Management Information System and training facilities for the Turkish Army and Navy under the HELSIM Programme. Project also covers the delivery of two separate fully integrated Helicopter Training Simulator Centres on a turnkey basis to both Army Aviation School Command in Etimesgut/Ankara and Cengiz Topel Naval Aviation Base Command in Kocaeli.



### F-4E 2020 Weapon Systems and Flight Training Simulators:

System provides IFR Training, VFR Training, Air Traffic Training, Air-to-air and Air-to-Ground Weapon System Training, Radar System Training, Tactical Training and emergency training to pilots of F-4E 2020 aircraft and the weapon system operators in a high-fidelity synthetic environment. For the first time in Turkey, two simulators installed in different locations will be able to carry out joint operations under the HLA&DIS interface connection.

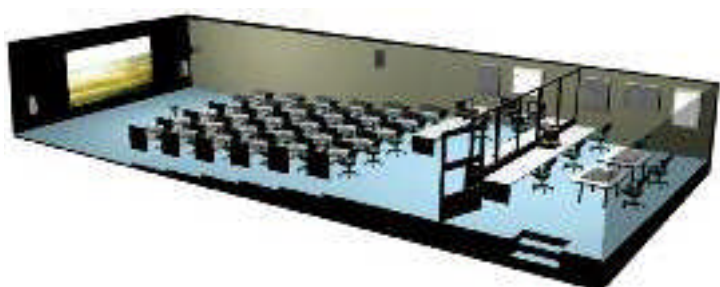


### Republic of Korea CN-235 Full Flight Simulator

A CN-235 FAA Level D Full Flight Aircraft Simulator has been designed and developed for the air force of the Republic of Korea by Havelsan in order to provide its pilots with realistic flight training in a realistic environment.

The Full Flight Simulator is composed of a five-channel 220 X 40 visual system, a five-channel IG imaging system, a six-axis motion system, a load control system, an instructor/operator console (IOS) and software, and a recording and replay system.

**Export Countries:** Korea.



### Pakistan Artillery Forward Observer Training Simulator (PK-AFOTS) Project

Havelsan originally developed its Artillery Forward Observer Training Simulator for the Turkish Land Forces, but exported a similar system to Pakistan for its Land Forces in following some client-specific alterations.

**Export Countries:** Pakistan.





### COTS Simulator

DBtron™ Simulation Debrief and After Action Review Software, DAQtron™ Simulation Data Acquisition and Recording Database Software, NAVItron™ Navigation Simulation Server Software and TERRAtron™ Terrain Simulation Server Software are HLA-based, next generation COTS Simulator Software, used on Military and Civil Level-D Certified Full Flight and Mission Simulators.



### ATacWarS™

ATacWarS™ is the next generation Advanced Tactical Wargaming System, with a Weapon Interaction Database, atmospheric and human fatigue effects over mission execution, HLA-based man-in-the-loop simulators, Joint Warfare, Distributed Simulation and Dismounted Infantry expansions, developed for military commanders and staff personnel and providing a complete modular solution for leader training.



### SHIPtron™

KaTron's SHIPtron™ product suite, ranging from desktop to full bridge simulators, consisting of the next generation marine and naval simulation and training systems, are the exact solutions addressing the requirements of the IMO STCW '95 Convention, taking fully into account the DNV requirements for 'Class (A, B, C & X) NAV' simulators.



### Naval Warfare Simulation System (NAWAS)

NAWAS (DEHOS) is a strategic-level war game simulation system under development to meet the computer aided war game requirements of naval forces. The system aims to provide an effective training environment that will enable personnel to train in the coordination of naval fighting units.

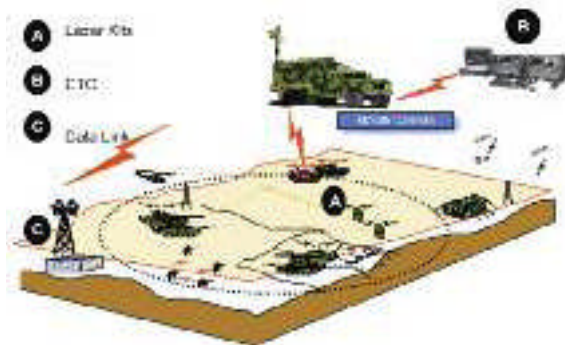




### Fire and Damage Control Training Simulator (FDCTS)

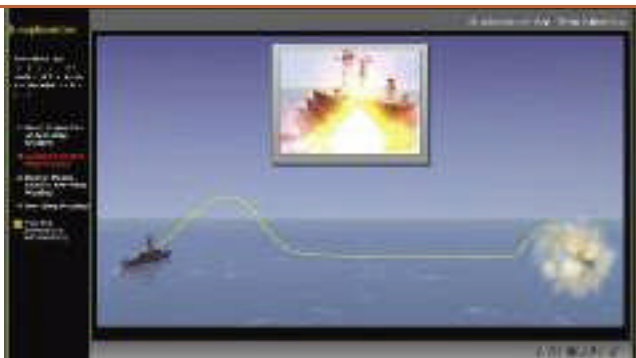
Training with realistic scenarios can be executed, recorded and evaluated by:

- Fire Training Simulator; with fire fighting scenarios under limited visibility and high temperature conditions,
- Damage Control Training Simulator; with damage control scenarios under limited visibility and free-floating surface conditions which can simulate flooded motion platform compartments under various sea-states.



### Combat Training Centre

The Combat Training Centre allows army personnel to practice combat scenarios in real environmental conditions with real weaponry, also allowing new combat strategies to be developed. The system comprises three main features: laser transmitters and sensors placed on personal harnesses; vehicles; and weapons that enable direct firing simulation. All data is transferred to the CTC via RF stations in the field. With the help of CTC Software, 2-D and 3-D observations of all events is possible.



### Joint Electronic Warfare Training System (JETS)

The Joint Electronic Warfare Training System is a computer-based education system in which the basics of Electronic Warfare information is given to armed forces staff in an interactive environment. The general specifications are as follows: Interactive training on EW concepts and application, EW training from beginner to expert, Lessons supported with multimedia objects, Question bank and evaluation module for trainee evaluation, Supplementary tools (glossary, help, unit conversion and search).



### Joint Electronic Warfare Training Simulation (JETSIM)

Joint Electronic Warfare Training Simulation provides EW Training to armed forces personnel for planning, application, control, coordination and support during joint operations in a computer environment.





### Vertical Wind Tunnel (VWT)

VWT is a free fall training simulator, providing an upward flowing column of air within which a person can experience all the effects of free fall in a controlled, safe environment. The usage of VWT are:

- Training of Special Forces
- Training of Airborne Troops
- Paratroops Beginning Free Fall Training
- Training of Acrobatic Parachute Teams

#### Technical:

Parachutists weighing from 50kg to 160kg will be able to perform skydiving maneuvers in the Vertical Wind Tunnel:

**Flight Chamber Diameter:** 4m

**Flight Area Height:** 8m

**Tunnel Dimensions:** 24m height (above ground), 39m width

**Air Speed:** ~45m/s min., ~72m/s max.

**Power:** ~2,000bhp



## COMMAND AND CONTROL SYSTEMS



### Peace Eagle: The Turkish Airborne Early Warning & Control System

Havelsan is participating in the Peace Eagle AEW&C programme as the sole in-country subcontractor of Boeing for the Mission Computing Segment (MCS) and Ground Support Segment (GSS).

Havelsan has developed the Turkish unique software modules for the mission processor, tactical display, communication, ESM systems and man-machine interfaces; and has realised the testing and integration of the software onto the 737 AEW&C aircraft.



### Maritime Patrol Aircraft (MPA) / Maritime Surveillance Aircraft (MSA) (MELTEM)

The aim of the Meltem Project is to convert CN-235 aircraft into an MPA/MSA configuration, as well as the delivery of associated ground segments. The project includes the development, integration and testing of six MPA for the Turkish Navy and three MSA for the Turkish Coast Guard. In addition, two ground control stations for the MPA and three ground control sites for the MSA are to be developed, integrated, installed and qualified in the programme.





### MilSOFT Combat Management Systems (Mil-CMS)

Mil-CMS is a Combat Management System that is compliant with modern approaches and open standards, and is aimed to satisfy the Command & Control needs of all naval platforms. Scalable and modular CMS Software architecture depends on open standards (ie DDS & OACE) and products.

## ELECTRONIC WARFARE

# aselsan



### Helicopter EW System (HEWS)

The Helicopter Electronic Warfare System (HEWS) Programme has been created to equip almost all of the rotary wing aircraft of the Turkish Armed Forces (TAF) with a comprehensive EW self-protection suite. The system will also be installed on the CN-235 transport aircraft of the Special Forces.

The HEWS approach will integrate Radar Warning Receiver (RWR), Laser Warning Receiver (LWR), Radar Jammer (RF Jammer) and Electronic Warfare Central Management Unit, as well as Missile Warning System (MWS) and Chaff/Flare Countermeasure Dispenser System (CMDS) capabilities into the same self-protection package for installation on 11 different types of airborne platforms in the service of TAF.



### Electronic Warfare Test and Training Range (EWTR)

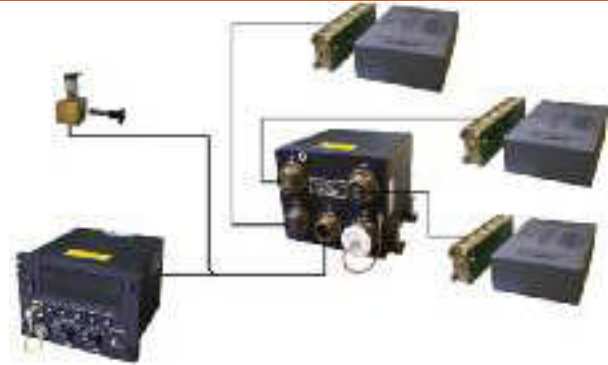
EWTR provides a fully-instrumented and integrated, near-real threat environment for all types of Electronic Warfare System Test and Pilot Training. Havelsan provides original turnkey solutions to all Electronic Warfare Range requirements. The EWTR has been designed and developed without drawing on foreign licensing or support, and was delivered to the Turkish Air Force in 1999, since when it has been successfully operated by Havelsan. The EWTR system has been modified to Pakistani Air Force requirements and has recently been selected by South Korea.

**Export Countries:** Pakistan and South Korea.



### SPREAD (Self Protection Expendibles Airborne Dispenser)

SPREAD is an advanced Countermeasures Dispensing System (CMDS) designed to increase the survivability and mission effectiveness of airborne platforms (F-16, F-4) against radio-frequency (RF) and infrared (IR) threats. SPREAD has various operational modes (manual, semi-automatic, automatic). SPREAD is capable of operating with RWR/MWS/LWR and MIL-STD-1553B data bus. SPREAD is glass-cockpit and NVIS compatible.



### AN/ALQ-178(V)5+

The AN/ALQ-178 is a proven integrated Radar Warning Receiver (RWR) and Electronic Countermeasures (ECM) Suite, providing the pilot with situational awareness and deceptive RF jamming. The AN/ALQ-178 provides intelligent control of chaff/flare dispenser systems for enhanced and coordinated ECM response. Provides complete self-protection for TuAF Block 50 F-16; Radar Warning Receiver (RWR), Power-managed electronic countermeasures, Coordinated expendable dispensing (chaff/flare), RWR, ECM and expendables management.



## JAMMER

**aselsan**

### ManPack Radio Controlled IED Jammer

The Manpack RCIED Jammer is designed to provide protection to patrols and military vehicles under the risk. The jammer simultaneously covers the different frequency ranges to prevent detonation of RCIEDs. Fully weatherproof and backpack mounted, it is equipped with extended mission-life rechargeable batteries; and is designed to counter the following threats: Amateur Radio; PAMR, PMR, FRS Radios; GSM 900, DCS1800; ISM.





#### MRJ-03 Manpack Jammer

The MRJ-03 Manpack Jammer has been designed by one of the leading manpack jammer supplier of the Turkish Armed Forces to provide effective protection against remotely-activated threats via wireless systems, mobile devices or other known sources. The jammer has accessories to allow mobile, fixed and portable use.

Mil-Std-810F, Built-in Test, VSWR protection for the Power Amplifiers.



#### Jammer

It is sound, waterproof and resistant to shocks. To jam signals from cellular phones that are being used to detonate bombs in cars or buildings. It is portable, has a high capacity and contains rechargeable Li-I batteries. It can obstruct GSM/PCN signals completely over a predefined area using TDMA technologies in the system's power supply.

#### Technical Specifications:

The device's effective zone depends on various factors, such as the base station's power supply and the power level taken from the nearest base station. The size of the system depends upon the model and version, but all are effective in the protection of VIPs, police or military units.

**Export Countries:** United Arab Emirates.



#### Jammers

We aim to fight against attacks through the use of technology, to protect security forces, civilians and property from damage or loss. Microdis concentrates its efforts on defence and security issues and develops various kinds of jammers –to counter remote controlled explosives in differing applications, such as vehicles, manpacks, building protection, convoy protection.

Working with the security forces, all of our jammers have been used and tested in the field in Turkey, and in Afghanistan and Iraq for some types. The tests have yielded a very high success rate.

Cooperation with the security forces allows Microdis to find the best solution for the special requirements of its customers. For example, the Cansiper 1915, one of the smallest and the lightest jammers available at only 5.5kg, has been developed with small mobile units in mind through feedback collected from the security forces.

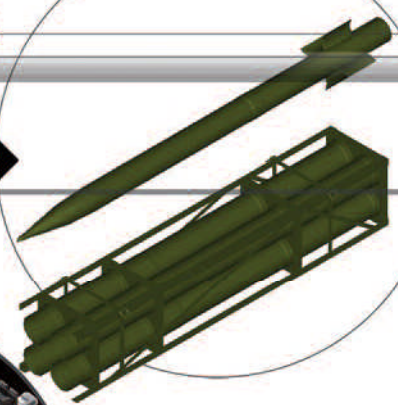
**Export Countries:** Iraq, Jordan, Malaysia, Pakistan and TRNC.







# WEAPON SYSTEMS & AMMUNITIONS





## aselsan



### Pedestal-Mounted Air Defence System (PMADS)

PMADS is a fully automated firing unit for Very Short-Range Air Defence System missiles, providing autonomous as well as coordinated operation with C3I systems. The main task of the system is the low-level air defence of stationary and moving forward troops, convoys and tactical bases in the battlefield. The modular turret, incorporating LRU sub-systems, can be integrated onto a variety of platforms with different types of missiles.

**Export Countries:** Netherlands.



### Stabilised Machine Gun Platform (STAMP)

STAMP is a stabilised and remotely operated weapon system against asymmetric threats. The system can detect, identify, deter, engage and destroy threats with a versatile sensor-weapon combination, suited on a fully stabilised turret that can be operated from a remote control console. Different calibre machine guns and various sensor suites can be tailored on the system according to the tactical requirements and the land/naval platform of the customer.

**Export Countries:** Malaysia and the UAE.



### STOP Remote Controlled Stabilised Naval Gun System

STOP is a new generation, cost-effective, medium-calibre weapon system for naval platforms. STOP can detect, identify, deter, engage and destroy threats with a versatile sensor-weapon combination, situated on a fully stabilised turret that can be operated from a remote control console.

The system provides a lightweight, versatile and effective means of force protection for applications ranging from capital ships to patrol craft. STOP has an exceptionally high hit and kill probability with an impressive firepower. Comprising a two-axis stabilised turret that contains an electro-optical sensor suite and fire-control software, STOP is capable of acquiring targets and engaging them autonomously. The optical sensor suite of STOP provides enhanced situational awareness and the ability to identify and engage threats, day or night, in all weather conditions.

**Export Countries:** Georgia, Malaysia and Pakistan.





## 155mm Towed Howitzer (Panther)

The Towed Howitzer developed by MKE under the ADOP-2000 programme, aimed at raising the ability of the artillery group of the Turkish Armed Forces (TAF) to respond to the needs of today's battle conditions, stands alongside its peers produced by the west. Using NATO-standard modern ammunition and utilising a 52 Calibre 155mm barrel, the Howitzer has been produced by MKE at its factories. Thanks to its auxiliary power unit the Towed Howitzer Panther (Panther) could reach a maximum speed of 18km/hour and is able to fire three rounds in 15 seconds and up to 6 rounds per minute with its semi-automatic loading system. Panther can leave its firing position in two minutes.

**Export Countries:** Pakistan.



## T-155 Self Propelled Howitzer (Firtina)

Operated by a crew of five, the 155/52 calibre T-155 Firtina Self Propelled Howitzer (SPH) has a maximum firing rate of up to six to eight rounds per minute thanks to its automatic loading system. The maximum range of the 155/52-calibre gun is 18km with M107 (HE), 30km with M549A1 RAP (HE) and 40km+ with ERFB/BB projectiles. The onboard ammunition load includes 48 155mm 52 calibre projectiles and associated charges.

MKEK delivers the complete 155/52-calibre Weapon System, Aselsan delivers both Communications System and Fire Control System (FCS) and 1st Main Maintenance Command, situated in Arifiye, Adapazarı, manufactures the platform, turret and some certain subsystems.

Firtina (Storm) SPH is powered by a MTU MT-881 Ka-500 1,000hp diesel engine coupled with an Allison X1100-5 fully automatic transmission. The vehicle has a range of 400km and a maximum speed of 65km per hour. The Turkish Land Forces (TLF) has received over 110 T-155 Firtina Self Propelled Howitzer (SPH) since April '04.





YÜKSEL SAVUNMA  
SİSTEMLERİ A.Ş.

IMTAKS  
UNMANNED - REMOTE CONTROLLED WEAPON SYSTEM



## IMTAKS

IMTAKS is a unmanned remote-controlled weapon station system that is able to capture motion on the battlefield, track targets, and transmit and control all data/commands via wireless or with cable. The system has been developed to protect military outposts from surprise fire by replacing the need for outdoor sentries, moving them to a safer place.

### Technical Specifications:

- Motion detection, surveillance of predefined symmetric and asymmetric patterns,
- Target tracking,
- Remote operations (wired/wireless),
- Electro-optic and thermal camera,
- Background learning,
- Remote Firing and fire safety system,
- Expandable power pack,
- Build-in Test,
- Ability to use the weapons from inventory,
- Easy rifle installation
- Shock absorption system,
- User-friendly operator's interface,
- Dual weaponry system,
- Variety of weapons (12.7mm / 40mm),
- Working temperature; -20°C / +55°C
- Sand- dust- humidity- and rain-proof,
- Motion ability +55° / -20° tilt, 360° pan angles,
- 250 bullets of 7.62mm (optionally: 500 bullets),
- Ammo counter,
- Laser range finder,
- Meteorological measurement unit,
- Software supported reticule correction.



# WEAPON SYSTEMS & AMMUNITIONS



## CIRIT SAL Guided Rocket

Roketsan's CIRIT Programme covers the design and development of a 2.75" semi-active laser guided rocket, and includes the integration of the missile onto the available TLF attack helicopters (including T129) and development of a smart launcher (MIL-STD-1760 interface). CIRIT is a highly accurate and cost-effective solution against soft-targets that is intended for use as a helicopter-launched air-to-ground weapon system, with a strapdown semi-active laser seeker, IM motor with reduced smoke propellant, IM tri-mode warhead and electro-mechanical control actuation system.



## UMTAS/OMTAS AT Missiles

Roketsan is the Main Contractor in the Long Range Anti-Tank System (UMTAS) and Medium Range Anti-Tank System (OMTAS) programmes, both of which will be designed and developed locally for the Turkish Army.

The missiles will have a considerable amount of commonality, including seeker systems and tandem warheads; and both UMTAS and OMTAS will be equipped with an Aselsan-built IIR seeker. UMTAS is to be installed on the T-129 attack helicopter.



## T-107 107mm Multiple Launch Rocket System and TR-107 Rocket Family

T-107 Multiple Launch Rocket System is a lightweight and towed weapon system used by artillery and infantry support missions during day and night and in all weather conditions.

TR-107 Rocket

**Maximum Range:** 11km+  
**Minimum Range:** 3km.



## T-122 122 mm Multiple Launch Rocket System and TR-122 Rocket Family

The most advanced system of its class  
The longest range 122mm rocket in the world

High hit ability

TR-122 Rocket

**Maximum Range:** 40km+  
**Minimum Range:** 21km without drag ring  
10km with drag ring

**Export Countries:** UAE.



# WEAPON SYSTEMS & AMMUNITIONS



 **roketsan**



## Kasirga 302mm Multiple Launch Rocket System and Artillery Rocket

**Maximum Range:** 100km

**Minimum Range:** 40km

4 Launcher Tubes

Each Kasirga Battalion composed of following vehicles:

1 Command Vehicle,

9 Launching Vehicles,

9 Supply & Reloading Vehicles.



## TOROS 230 Medium Range Artillery Rocket

TOROS 230 comprises five sub-systems: Launcher Vehicle, Logistics Vehicle, Maintenance Vehicle, all based on a 6x6 truck chassis, Fire Command-Control Vehicle, based on a 4x4 vehicle and TOROS 230 ordnance.



## TOROS 260 Long Range Artillery Rocket

TOROS 260 consists of five sub-systems: Launcher Vehicle, Logistics Vehicle, Maintenance Vehicle, all based on a 6x6 truck chassis, Fire Command-Control Vehicle, based on a 4x4 vehicle, and TOROS 260 ordnance.



## 81mm Prefragmented Mortar Ammunition

81mm Prefragmented Mortar Ammunition (PMA) is an indigenously developed high cost effectiveness solution for infantry fire support.

Basic specifications of 81mm PMA:

- More than 2,850 steel balls.
- 33m lethal radius (1 lethal frag/m<sup>2</sup> on 1.5mm mild steel).
- 2.9-4.4 times lethal area compared to the existing 81mm ammunition.
- High cost effectiveness.
- Same flight characteristics with the existing 81mm MOD 214 ammunition eliminating the need for an extra firing table.



# WEAPON SYSTEMS & AMMUNITIONS



CANIK55

## S-FC 100

Launched in 2008, the Canik 55 S-FC 100 model, incorporating a double-action mechanism and an alloy frame, brings extra handling comfort to the user thanks to its 100mm barrel and 15-round capacity. In addition to the specially-designed V-shape compensator, the adjustable rear sight, the accessory rail and the two-hand use capability, this version offers as standard the Canik 55's patented loaded chamber indicator feature to the user.

NATO Stock No: T6472



YAVUZ 16 GİRSAN

## Yavuz 16 Family

The whole Yavuz 16 family of weapons are semi-automatic with a double-action, short-recoil operation system. The barrels are produced using cold forging technology, giving the pistols a longer barrel life of 30,000 shots; while the body of the weapon is produced using light alloy steel. The Yavuz 16 family functions perfectly between  $-40^{\circ}\text{C}/+60^{\circ}\text{C}$ . The safety system comprises a safety tumbler, firing pin safety and a half-cock position, as well as a special safety system – a chamber loaded indicator, making it possible to check visually whether there is a round in the barrel without having to retract the slide.

NATO Stock No: MC 8-500-Compact M.C. Tabanca  
1005-27-032-8786.



MC 23.45



ZİRVE



BORA LIGHT



TUGRA



## SARSILMAZ®



### CM9 Black

**Caliber:** 9x19mm Parabellum  
**Total Length:** 187.5mm  
**Total Height:** 140mm  
**Barrel Length:** 96.75mm  
**Grip Width:** 28mm  
**Average Weight (with empty mag.):** 800gr  
**Magazine Capacity:** 15  
**Muzzle Velocity:** 340m/sec ( $\pm 10$ m/sec)  
**Minimum Barrel Firing Life:** 25,000 rounds.



### KILINÇ 2000 LIGHT Black

**Caliber:** 9x19mm Parabellum  
**Total Length:** 210mm  
**Total Height:** 140mm  
**Barrel Length:** 118.65mm  
**Grip Width:** 34mm  
**Average Weight (with empty mag.):** 990gr  
**Magazine Capacity:** 15  
**Muzzle Velocity:** 350m/sec. ( $\pm 10$ m/sec.)  
**Minimum Barrel Firing Life:** 25,000 rounds.



### ST10 Black

**Caliber:** 9x19mm Parabellum  
**Total Length:** 200mm  
**Total Height:** 145mm  
**Barrel Length:** 115mm  
**Grip Width:** 32mm  
**Average Weight (with empty mag.):** 900gr  
**Magazine Capacity:** 15  
**Muzzle Velocity:** 340m/sec ( $\pm 10$  m/sec)  
**Minimum Barrel Firing Life:** 25,000 rounds.



### K2 CUSTOM DELUXE Titan Golden

**Caliber:** 9x19mm Parabellum  
**Total Length:** 210mm  
**Total Height:** 140mm  
**Barrel Length:** 118mm  
**Grip Width:** 33mm  
**Average Weight (with empty mag.):** 1,000gr  
**Magazine Capacity:** 15  
**Muzzle Velocity:** 360m/sec. ( $\pm 10$ m/sec)  
**Minimum Barrel Firing Life:** 25,000 rounds.





## Zigana M16

Production of the M16 began in 2001. It has a classic frame, and is the weapon of choice for both the army and civilians. It has a long barrel (214mm) and a good effective range (75m/sec).

**Calibre:** 9x19mm

**Length:** 214mm

**Height:** 140mm

**Width:** 33mm

**Line of Sight:** 158mm

**Magazine Capacity:** 15/Optional: 17-20

**Trigger Pull:** Single Action: 2kg, Double Action: 4.5kg

**Weight:** 940gr

**Export Countries:** Bolivia, Colombia, Czech Republic, Germany, Pakistan and Paraguay.  
NATO Stock No: 1005270241485.



## Zigana T

The Zigana T boasts a high effective range, as well as a 370m/sec muzzle velocity, minimum recall, an effective range of 100m and an original designed frame.

**Calibre:** 9x19mm

**Length:** 220mm

**Height:** 141mm

**Width:** 35mm

**Line of Sight:** 158mm

**Magazine Capacity:** 15/Optional: 17-20

**Trigger Pull:** Single Action: 2kg, Double Action: 4.5kg

**Weight:** 980gr

**Export Countries:** Costa Rica, Guatemala, Indonesia, Pakistan, Paraguay and Syria.  
NATO Stock No: 1005270241486.



## Zig M 1911

This pistol is made entirely of stainless steel, and due to the sensitivity of its trigger and its quick pulling out specialty it is possible to have consecutive well-directed shootings. It incorporates a grip safety system and also a safety catch.

**Calibre:** 0.45 ACP

**Length:** 215.5mm

**Height:** 137.9mm

**Width:** 34mm

**Line of Sight:** 164mm

**Magazine Capacity:** 7/Optional: 8-10

**Trigger Pull:** Single Action: 3kg

**Barrel Length:** 127.5mm

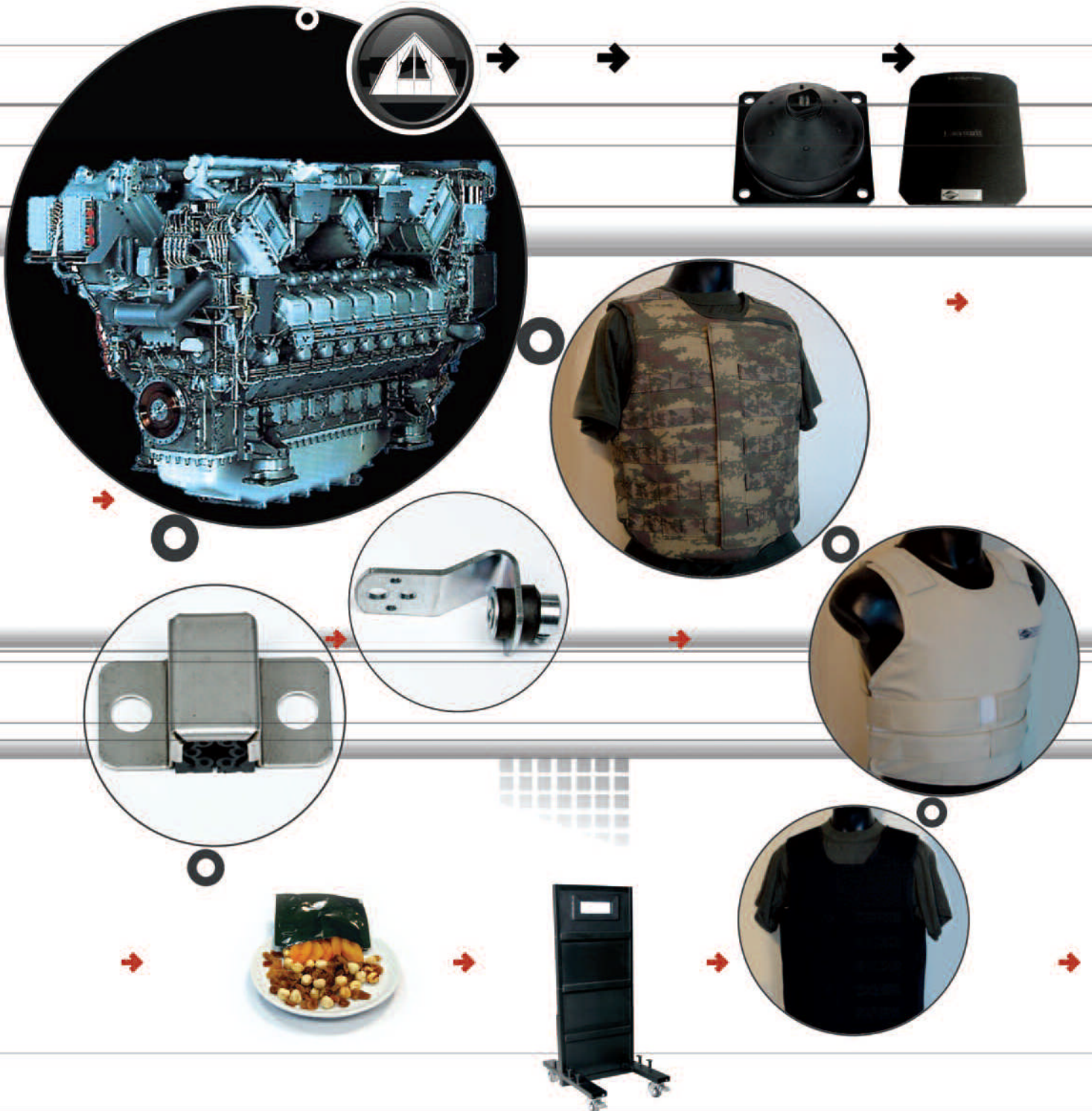
**Weight:** 1,120gr.

**Export Countries:** Italy and the US.





# SUPPORT SYSTEMS & LOGISTIC SERVICES







In the Defence Sector, AGS has been engaged in the supply of Shelterisation Systems, Static and Mobile Generators and Power Feed/Distribution Systems, Electrical Control/Command Systems for Land and Marine Vehicles and Vessels, Monitoring and Safety Systems for Mobile Medical/First Aid Systems.

#### **Engineering / Design / Manufacture Specification**

Power, Measure and Automation Systems Electric and Electronic Equipment and Simulation Systems.

#### **Procurement / Purchasing / Manufacture**

**Specification** Power, Measure and Automation Systems Electric and Electronic Equipment and Simulation Systems.

#### **Prototype and Serial Production / Making**

**Specification / Technical Data Set** Power, Measure and Automation Systems Electric and Electronic Equipment and Simulation Systems.

#### **Configuration / Assembly and Commissioning**

**Technical Data Set** Power, Measure and Automation Systems Electric and Electronic Equipment and Simulation Systems.

#### **Supervisor and Project Management / Education**

**Power, Measure and Automation Systems Electric and Electronic Equipment and Simulation Systems**  
**Original Product and Systems** Dashboard, Command Control Console, Command Computers(Hardware/Firmware), CANBUS Systems (Hardware/Firmware), Shelter Electrification, Command Systems and Cable Systems.

#### **Integrated Product and Systems (Business Partner)**

Generators, Auxiliary Power Units, Fire Extinguishing/Suppressing Systems, APU( Auxiliary Power Unit), CBRN (Detection/Perception) Systems, Interior and Exterior Lighting Navigation Systems, Cable Systems.

**Research and Development** Solar Energy Systems, Small and Medium Scale, Interconnected with Network, Electricity Generation and Distribution.







## 122mm Composite Launch Tube

The grooved launcher tubes of the T-122 MLRS (Multi-Launch Rocket System) are produced entirely from composites in a one-step production process using a patented method.

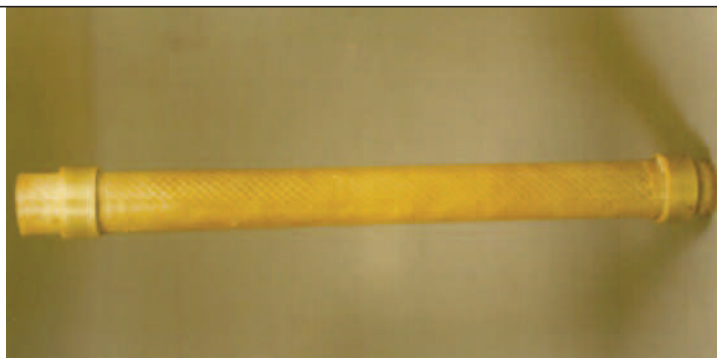
### 122mm Composite Launch Tube:

**Length:** Various

**Structure:** Composites, Filament wound

**Calibre:** 122mm

**System:** T-122 Sakarya MLRS of Roketsan.



## Sub-system Protection for Armoured Vehicles

Composite armour to protect the critical sub-systems of armoured military vehicles: Using advanced composite armour materials in hybrid or monolithic designs, selected protection levels from MIL, NIJ and STANAG ballistic armour standards can be achieved. The performance of these products has been proven in the field.

**Weight:** various

**Structure:** Advanced Composite Armour Material/Hybrid.



## Stinger Composite Coolant Reservoir Assembly

This is a missile coolant reservoir that has an operating pressure of 3,000-6,000psig that is manufactured from advanced composites. The design-burst pressure of this critical component, whose qualification tests were carried out in Turkey, is 18,000psig.

**Internal Design Pressure:** 1,240 bar/18,000psig,

**Weight:** 3.9kg

**Structure:** S2 Glass Composite, Filament wound.

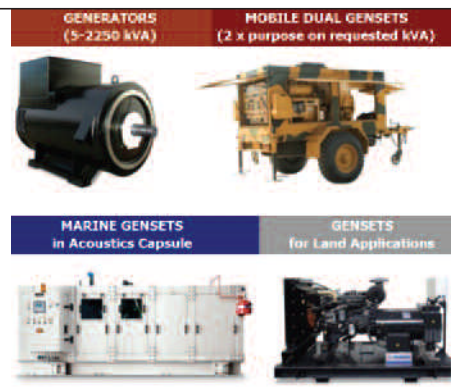
NATO Stock No: 1440-01-451-5825.



All of İsbir's products are capable of operating within a capacity range of 5–2250 kVA; and have been specially designed and manufactured by İsbir. In recent years, İsbir has launched numerous R&D studies and has manufactured many parts for generators. The company has now launched efforts to develop "Generators for Renewable Energies", and studies are underway to progress this line of products.

İsbir Elektrik has implemented the ISO 9001:2000 Quality Management System, the ISO 14001:2006 Environment Management System and the OHSAS 18001 Occupational Safety and Health Management System, and has been certified by accredited authorities. Additionally, the company has been awarded the Quality Prize by TSE (Turkish Standards Institute) in 2004.

After undergoing EMC tests, İsbir's products are now able to be marked with the "CE" sign by the accredited authorities.



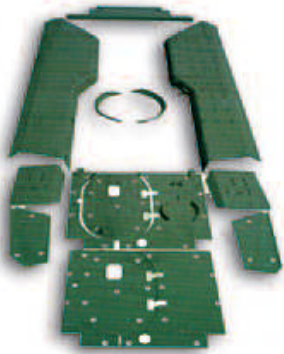


## Shelter – ACE III

Our shelters are manufactured according to NATO 6516/SHCPE/86 standards. They are adjustable as required according to the intended area of use in terms of electronics equipment and protection against environmental changes, and are also transportable by land/sea/air according to military standards.

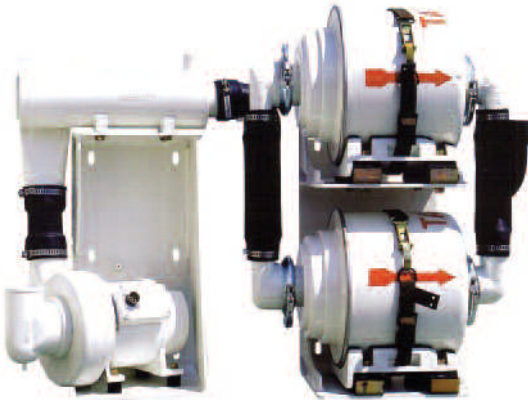
### Technical Specifications

- RFI, EMI Protection and EMC Compatibility
- Compliance with NATO 6516/SHCPE/86 standards.



## Add-On Armour System

- Manufactured from ballistic armour steel kit.
- To be bolted onto aluminium surfaces of military systems, such as vehicles, turrets and cupolas, to provide a high level of ballistic protection.
- Manufactured using modern laser cutting machines, which does not affect the ballistic properties of the armour.
- Armour plates are available in any colour.



## NBC Air Filtration System

- Filtered fresh air supply of 150m<sup>3</sup>/hour through its special high-speed fan.
- Pre-filtration and active filter modules provide immediate and effective particle filtration.
- Extra protection by positive pressure against leakage probability.
- Highly flexible distribution hoses and mask adapters with adjustable air flow rate.
- Epoxy polyamide top coat in NATO standards and corrosion resistant by means of lightweight aluminium alloy construction.
- Air filtration system protecting the 13 crew from impact of the nuclear, biological and chemical weapons.



## 12.7mm Machine Gun Turret

- Carries a 12.7mm machine gun mounted on top of the vehicle
- All around ballistic protection with the steel armour kit as per MIL-A-46100
- Gunner's seat available under the cupola
- 360° rotation of the cupola
- Anti-skid surface application and coating applied according to military specifications.

# SUPPORT SYSTEMS & LOGISTIC SERVICES



## OZTI Field Kitchen

Öztiryakiler is a manufacturing company that is involved in the design, sale and service of industrial kitchen appliances and equipment.

A family owned company, Öztiryakiler has over 60 years of experience in its field, with a product range of over 3,000 different items and exports to over 102 countries in five continents.

Öztiryakiler has been an industry leader in Turkey for many years; presenting OZTI, our growing brand, on the global market.

Aside from its own product line, Öztiryakiler has also become the primary distributor of many well known international brands for the Turkish market.

**Product Groups:** Field Kitchens, Gas and Electrical Main Kitchen Appliances, Sanitary and stainless steel medical equipment, Cold units, Dishwashers, Mixers, Pastry equipment, Table and chair sets, Stainless steel pots & pans and Service trolleys

OZTI Field Kitchen is capable of feeding 400 soldiers (800 soldiers with simple meal) in 2 hours at any time, any site and in any climate.

Each OZTI Field Kitchen is equipped with 4 independent diesel burners.

The kitchen trailer can be towed by any type of vehicle.

**Export Countries:** Iraq, Georgia, Iraq (US Army) and Malaysia.



**Savronik A.Ş.**

## UAV Ground Control Station Shelter

The Unmanned Air Vehicle (UAV) Ground Control Station Shelter, is a NATO-I shelter type produced in accordance with NATO-6516/SCHP/86- "Allied Command Europe-Standard Shelter Technical Specifications".

Gözcü Air Vehicle Control Station has subsystems and interior integration which are designed with conformity of MIL-STD-1472F to give users an opportunity for working comfortably in operational conditions.



## MREs

The high quality Meals Ready-to-Eat (MREs) manufactured by UNIFO have a two-year shelf-life under ambient temperatures and contains no preservatives.

UNIFO is also manufacturing and supplying heating pouches with MREs and Lavash bread with a one year shelf-life under ambient temperatures.

## Hygiene & Quality

UNIFO operates in conformity with the ISO 9001 and ISO 22000 Quality Standards; and its MREs are produced according to Hazard Analyses and Critical Point (HACCP) requirements.

## Consumers of Ration Packs:

**Defence Sector:** During military exercises, extraordinary situations, special missions.



**Civil Sector:** During emergencies (fire, earthquake, flood etc) by governmental and non- governmental organisations (NGO's) (Red Crescent, Red Cross etc); by outdoor activity groups, national and international rescue organisations, yachting clubs.





# MILITARY CLOTHES/FINERY EQUIPMENT



# MILITARY CLOTHES/FINERY EQUIPMENT



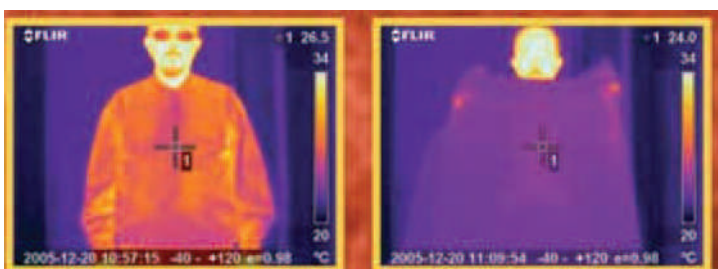
## CBRN Suits

CBRN suits provide effective and long-term protection against chemical, biological, radioactive or nuclear weapons. They are water repellent, oil repellent, and offer anti-near infrared (NIR) protection, while being non-flammable/flame retardant, breathable, windproof, washable, decontaminatable, antibacterial, non-toxic, odourless, non-corrosive and light weight. They also have excellent adsorption properties.

NATO Stock No (NSN):

NSN 8305270383996 NBC 1001,  
NSN 8305270387483 NBC 1001 KV,  
NSN 8305270392716 NBC 1002 PN,  
NSN 8305270392741 NBC 1003 K,  
NSN 8305270392975 NBC 1003 PN

NSN 8305270387332 NBC 1001 K,  
NSN 8305270388817 NBC 1002 K,  
NSN 8305270392740 NBC 1003,  
NSN 8305270392742 NBC 1003 KV,



## Silver Invisible Fabrics – Tex-Therm

Tex-Therm is made from natural pure silver and is in no way hazardous to health. It provides protection from the harmful effects of electromagnetic waves, while incorporating heat conductive and heat reflective properties, thus aligning the body temperature with that of the local environment, and consequently prevent detection from thermal cameras. Tex-Therm also prevents static electricity.

NATO Stock No (NSN): 8305270383965 F 1992 R



## Detachable Snapfit Tactical Vest & Rucksack (DSTR)

DSTR® provides transportable combined storage for ammunition, nutrition, shelter and clothing. It is composed of a modular two-component rucksack and tactical vest that can be easily detached in action to reduce weight. It also boasts waterproof and high tenacity tactical webbing fabrics.

NSN: 8305270392997 S 1022

NSN: 8305270392992 C 6633



## Ghillie Suits

Ghillie Suits provide Near Infrared (NIR) Protection, which prevents detection through night vision equipment. They also allow Far Infrared (FIR) Protection, preventing detection by thermal camera; while also incorporating flame-retardant, anti-mosquito, anti-bacterial, anti-fungal, water repellent, oil repellent and light weight properties. They can be produced to any colour or pattern.



# MILITARY CLOTHES/FINERY EQUIPMENT



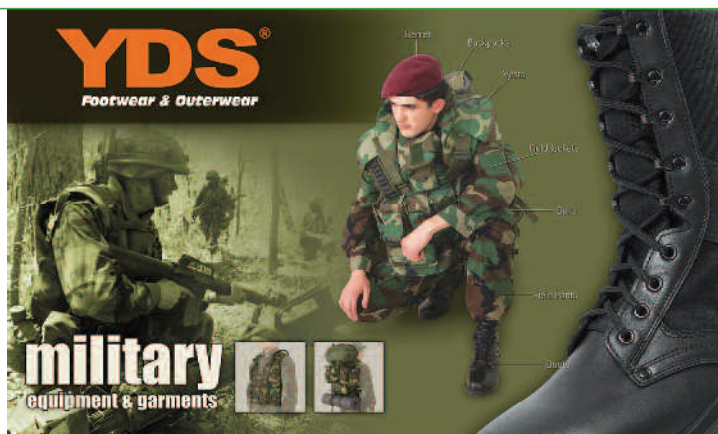
YAKUPOĞLU

## High-Tech Footwear (Boots/Shoes)

Sole Properties Technology: Direct injection, double density

Materials: PU/PU – Rubber/Rubber – PU/Rubber

- Lightweight, flexibility, high performance and comfort,
- Direct injection provides max durability and resistance for sole bonding,
- Anti-static treatment minimises electrostatic build up, avoiding the risk of spark ignition,
  - Energy absorbing heel provides comfort when jumping, walking, running, etc, by absorbing downward force in excess of body weight,
- Hydrolysis resistance prevents harmful effects of very hot and humid environments on the sole,
  - Oil-resistant outsole.



## Technical Textiles (Outerwear)

Backpacks  
Munitions Vests, Ballistic Protective Vests  
Sleeping Bags  
Camping beds  
Tents, Insulated Cold Climate Tents  
Various Uniforms, Protective Garments  
Cold Weather Garments, Gore-tex Breathable and Water Resistant Outerwear Products  
Accessories, Holsters, Gloves, Goggles, etc.  
We are one of the leading suppliers to the Turkish Military and Police.

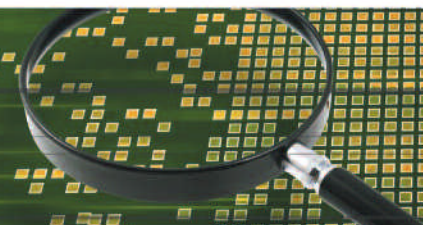
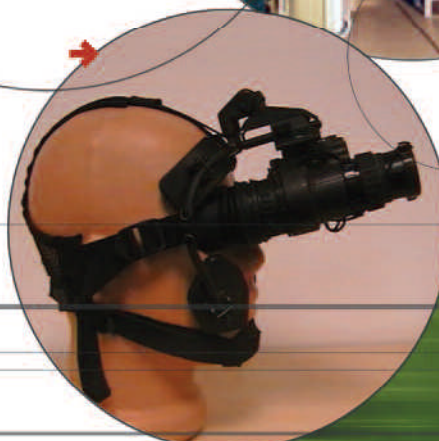
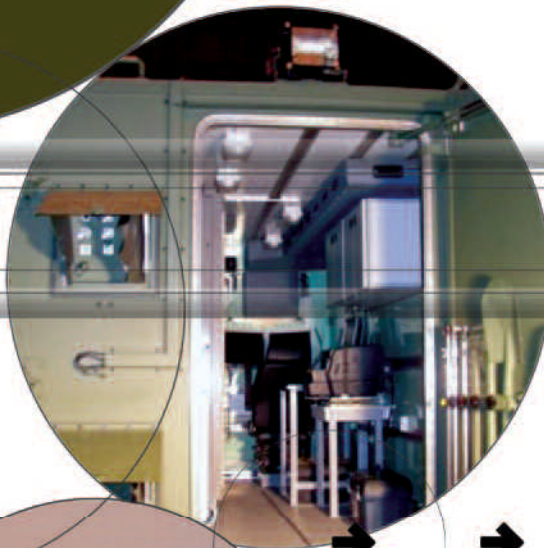
**Export Countries:** Albania, Azerbaijan, Belgium, Denmark, France, Georgia, Germany, Italy, Lebanon, Oman, Portugal, Qatar, Spain, UAE and the UK.

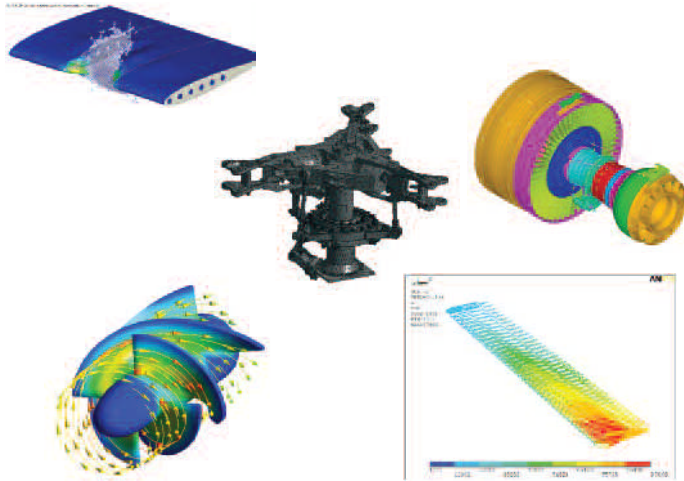






# R&D/ ENGINEERING

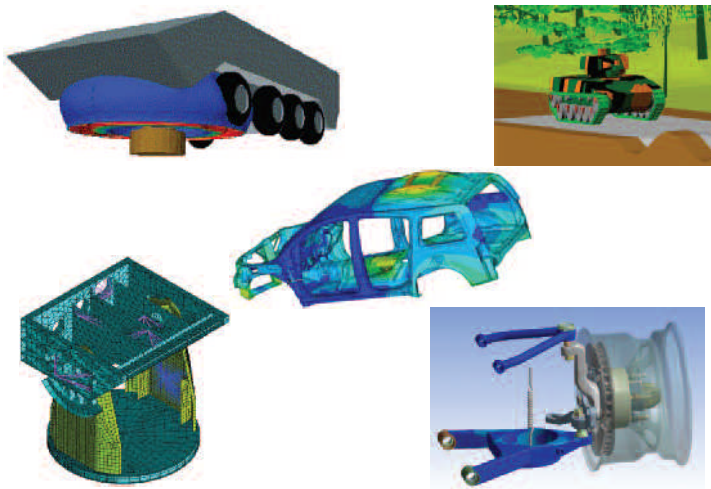




**FIGES provides advanced engineering services, consultancy, training and related software for the following areas for aerospace, land and naval platform applications and associated subsystems.**

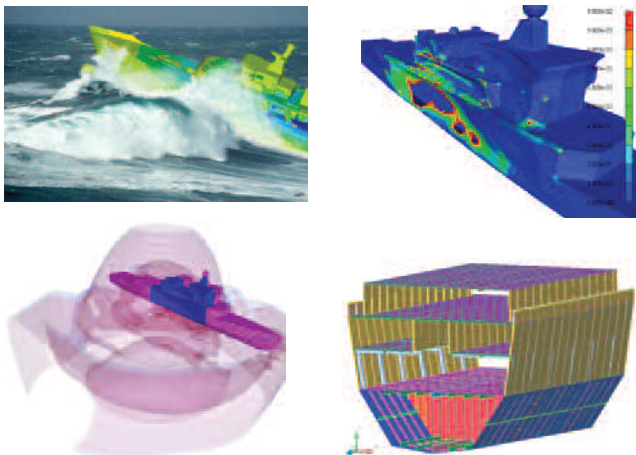
## Aeronautical and Space Platforms:

- FEA (Finite Element Analysis) applications in structural integrity, strength of materials and structural stability, fatigue, vibration, acoustic, crash, blasting, ballistic and shock calculations,
- CFD (Computational Fluid Dynamics) applications in aerodynamic, aeroelastic applications and flutter calculations,
- MBD (Multi Body Dynamics) applications, such as flap motion and landing gear analysis,
- Electromagnetic shielding and heat transfer calculations.



## Land Platforms:

- FEA (Finite Element Analysis) applications in structural integrity, strength of materials and structural stability, fatigue, vibration, acoustic, crash, roll-over, blasting, covering charge, ballistic and shock applications,
- CFD (Computational Fluid Dynamics) applications in propulsion systems analyses, propulsion system cooling analyses, under-hood analyses, exhaust system design, fog distribution and HVAC simulations,
- MBD (Multi Body Dynamics) applications to simulate and analyze vehicle motions on virtual roads and environment.



## Naval Platforms:

- FEA (Finite Element Analysis) applications in structural integrity, strength of materials and structural stability, fatigue, vibration, acoustic, blasting, ballistic and shock calculations,
- CFD (Computational Fluid Dynamics) applications in ship design optimization, rudder, propeller, flap analyses, exhaust system design, fog distribution and HVAC simulations,
- Electromagnetic shielding and heat transfer calculations.





### Armoured Service Vehicle

The concept bus is the first ballistic test prototype of a new bus family that ranges from 7–12m in length and personnel capacity of 10–40 people. The concept vehicle is suited for mass transportation rather than as a military armoured personnel carrier or combat vehicle.



### GEKKO

The GEKKO Multi-purpose Composite Vehicle, the first phase of which will be completed in the first quarter of 2010, will include full body lightweight composite armour. The vehicle is expected to make an impact on the market due to its agility under asymmetric threats, harsh environmental conditions and with its add-on armours for higher threat levels, which are planned to be installed in the second phase.





# CONTACT INFORMATION







## **UNDERSECRETARIAT for DEFENCE INDUSTRIES DEPARTMENT of INTERNATIONAL COOPERATION**

The primary responsibility of the International Cooperation Department (ICD) of the Undersecretariat for Defence Industries (SSM), is to promote the Turkish Defence Industry to reach a significant cooperation and sales potential in international markets. ICD acts on behalf of the Undersecretariat as a specialized department in the framework of collaboration in defence procurement programmes and industrial networking activities.

The Undersecretariat for Defence Industries (SSM) attaches a great deal of importance to international cooperation and supports the participation of Turkish industrial capabilities in joint or international procurement programmes. In this context, ICD is responsible for establishing bilateral and multilateral relations with Turkey's allied counterparts, preparing service notes on defence industries of the related countries, coordinating marketing communication activities at international platforms (international exhibitions, conferences, industry days, cooperation

meetings etc.) and organizing the official visits of foreign delegations to Turkey. SSM works closely with government agencies, the Turkish Defence Industry Manufacturers Association (SaSaD), NATO, NGOs and industrial entities. SSM also provides comprehensive support to the presentation of Turkish defence industrial capabilities under a

National Participation concept at international defence exhibitions, such as

IDEX in Abu Dhabi, DSA in Malaysia, IDEAS in Pakistan, SOFEX in Jordan and DSEi in the UK.

These activities are focused on creating new opportunities for both the Turkish defence industry as well as their international partners, and support the defence industry sector to highlight their products and services internationally. These efforts have led the Turkish defence industry to establish a strong presence in various areas and today the Turkish defence industry has increased its presence to compete in the international defence market.

# CONTACT INFORMATION



## AGS Ltd. Şti.

19. Sok. No: 10 Hekimköy Sitesi Ümitköy 06800 Ankara, TÜRKİYE  
Tel: +90.312 235 40 40 • Fax: +90.312 235 92 45  
www.ags-ltd.com.tr



AGS was founded in 2002 to meet various needs of civil and defence industries across a wide spectrum of turnkey engineering and technological contracting activities. AGS has developed the diversity and experience to meet any requirement in terms of Electrification, Automation, Control, Instrumentation and Low Voltage Applications.

With a qualified workforce of over 50 engineers, technicians and administrative staff AGS offers engineering, design, integration, procurement, manufacturing, assembly, commissioning, fast prototyping and project management services, and is aiming to become a pioneer and trustworthy partner in the sector.

In the Defence Sector, AGS has been engaged in the supply of Shelterisation Systems, Static and Mobile Generators and Power Feed/Distribution Systems, Electrical Control/Command Systems for Land and Marine Vehicles and Vessels, Monitoring and Safety Systems for Mobile Medical/First Aid Systems.

## Anadolu Deniz İnşaat Kızakları San. ve Tic. A. Ş.

Tersaneler Cad. No: 22 Tuzla 34944 İstanbul, TÜRKİYE  
Tel: +90.216 446 61 14 • Fax: +90.216 447 07 33  
info@adik.com.tr • www.adik.com.tr



Anadolu Deniz İnşaat Kollektif Şirketi, which operated throughout the 1950s from the Haliç (The Golden Horn) – Taşkızak (Graving dock) site, an area which could be regarded as the cradle of the Turkish shipbuilding industry, was renamed Anadolu Deniz İnşaat Kızakları Limited Şirketi on February 22, 1971. Since that time, the company has continued trading from the Golden Horn and from its headquarters in Büyükdere. The company built:

- 11 tankers and 6 train barges with capacities of 120-150-350-650 DWT for the TCDD (Turkish Republic Railway Operator),
- a ferry boat for the T.C. Sahil Sıhhiye (Turkish Republic Coastal Sanitary Authority),
- three inspection boats for T.C. Gümrük Muhafaza (Turkish Republic Customs Authority),
- two dump barges of 350 DWT each, two tip barges of 300 DWT each, three sand barges of 5,000 DWT each, 12 tugboats, a personnel barge of 180 DWT and seven bottom-tipping barges of 125 DWT each for the T.C. Bayındırlık Bakanlığı (Turkish Republic Ministry of Public Works), and
- 98 further vessels of diverse types, including six yachts, 45 coasters and tankers.

## Alcatel Lucent Teletaş Telekomünikasyon A. Ş.

Atatürk Cad. 1. Esenşehir No: 4 Yukarı Dudullu Ümraniye 34775 İstanbul, TÜRKİYE  
Tel: +90.216 579 20 00 • Fax: +90.216 420 75 43  
www.alcatel-lucent.com.tr



Alcatel-Lucent (Euronext Paris and NYSE: ALU) is the trusted partner of service providers, enterprises and governments worldwide, providing solutions for the delivery of voice, data and video communication services to end-users. A leader in fixed, mobile and converged broadband networking, IP technologies, applications and services, Alcatel-Lucent leverages the unrivalled technical and scientific expertise of Bell Labs, one of the largest innovation powerhouses in the communications industry. With operations in more than 130 countries and the most experienced global services organisation in the industry, Alcatel-Lucent is a local partner with a global reach. Alcatel-Lucent achieved revenues of Euro16.98 Billion in 2008, and is incorporated in France, with executive offices located in Paris.



# CONTACT INFORMATION



## Alp Aviation



### Alp Havacılık Sanayi ve Ticaret A. Ş.

Organize Sanayi Bölgesi 8'nci Cadde, 26110, Eskişehir, TÜRKİYE  
Tel: +90.222 236 13 00 • Fax: +90.222 236 12 85  
alpavacilik@alp.com.tr • www.alp.com.tr

Alp Aviation, located in Eskişehir, Turkey, is a world-class manufacturer of airframe and engine parts and components, supporting a number of international OEMs, such as Sikorsky Aircraft, Pratt & Whitney and Goodrich LG.

Alp Aviation is a joint venture between Sikorsky Aircraft and Turkey's Alpatra Group that dates back to 1998. One of the most important names in the Turkish aerospace sector, Alp Aviation is a significant supplier of flight control assemblies, airframe components and tail rotor drive shafts for Sikorsky's BlackHawk, SeaHawk and S-76 platforms, and it is qualified as the only non-US flight safety part source for Sikorsky. Alp Aviation also supports several US and International programmes, including the F-35, F135, F-22, A380 and Boeing 787.



### Ares Shipyard Ltd. Şti.

Antalya Free Zone 07070 Antalya, TÜRKİYE  
Tel: +90.242 259 52 61 • Fax: +90.242 259 52 63  
ares@aresshipyard.com • www.aresshipyard.com

The Ares Shipyard, with two separate yard facilities covering a total production area of 7,000m<sup>2</sup> in the Antalya Free Zone, is engaged in the design, development and construction of high-performance, special-duty naval platforms with advanced-composite and aluminium structures. As an ISO 9001-2000 certified company, ARES builds purpose-designed vessels for defence, law-enforcement, harbour-master, sanitary and similar organisations for patrol, escort, assault, fast intervention, personnel transportation, search and rescue, anti-smuggling, surveillance, environment control, ambulance and similar purposes.

## aselsan



### Aselsan Elektronik Sanayi ve Ticaret A. Ş.

P. K.: 1, Yenimahalle, 06172, Ankara, TÜRKİYE  
Tel: +90.312 592 10 00 • Fax: +90.312 354 13 02, 354 26 69, 385 19 00  
marketing@aselsan.com.tr • www.aselsan.com.tr

Aselsan Elektronik Sanayi ve Ticaret, the leader in Turkish defence electronics, was established in 1975 as a joint stock company focusing on the design, development and manufacture of state-of-the-art defence electronics products/systems for military and professional applications.

Today, Aselsan, with its significant level of technology and 3,300-strong highly-qualified workforce, has become the backbone of Turkish Defence Industry.

Aselsan's main fields of activity include: Military Communication Systems; Radar & Electronic Warfare Systems; Electro Optic Systems; Navigation & Avionic Systems; Weapon Systems; C4ISR Systems; Naval Systems; Professional Communication Systems; an Intelligent Transportation Systems.

The technological capabilities of Aselsan begin with the design stage, including hardware, software, mechanical and optical design. Its production capabilities cover electronic/microelectronic production, and mechanical and printed circuit board production; while its modernisation and integration capabilities cover work on existing and/or new systems of its customers. Aselsan reinforces its position by providing high quality products, backed by a comprehensive after sales service.

# CONTACT INFORMATION



## Atard Savunma ve Havacılık Sanayi İleri Teknoloji Uygulamaları Araştırma ve Geliştirme A. Ş.

OSB Teknoloji Geliştirme Bölgesi Piramit 2 No: 11 26110, Eskişehir, TÜRKİYE  
Tel: +90.222 236 23 95 • Fax: +90.222 236 23 96  
info@atard.com.tr • www.atard.com.tr



Atard is an internationally-competitive defence and aerospace company that provides and develops advanced technology applications and solutions on the basis of national resources and worldwide knowledge. Our highly-skilled and experienced technology team designs and develops to-the-point, top level technological products in collaboration with academia and contributes to national defence and the international aerospace industry.

Atard Defence and Aerospace Inc. has been set up in Eskişehir/Turkey to serve both domestic and international integrator companies. Atard's design office is in the Technology Development Centre of Eskişehir in the Organised Industrial Area (ATAP); while its composite manufacturing facility is in the Eskişehir Organised Industrial Zone. The company has liaison offices in Istanbul and Ankara in Turkey, and in Milan/Italy.

The engineering and R&D team, together with its alliances, is composed of selected senior engineers and scientists with an average experience of 15 years and a broad range of M.S. and Ph.Ds.

## Atel Telekomünikasyon San. Tic. Ltd. Şti.

Turan Güneş Bulvarı 17/18 Yıldız, Çankaya, Ankara, TÜRKİYE  
Tel: +90.312 442 62 55 • Fax: +90.312 442 62 18  
atel@atel.info.tr • www.atel.info.tr



Atel Telekomünikasyon has been working to supply high-end solutions for all kinds of military and civil wireless communication needs since 1997. Focusing on R&D and manufacturing, ATEL has been serving the Turkish Armed Forces (TAF) with Radio Frequency Jammer Systems for more than five years. In cooperation with the Harris Corporation, ATEL is at the forefront of efforts to add local value in the supply of high technology communication systems to TAF.

Atel's RF Jammers are developed and manufactured drawing on the vast experience of the Turkish military in its struggle against terrorism, and is ready to support efforts aimed at world peace carried out by foreign militaries.

Atel has sufficient flexibility, power and capacity to develop solutions that satisfy the specific needs of global customers with international partnerships. Due to its provision of a well-disciplined, conscientious and high quality service, Atel has become a shining star in the Turkish defence sector.

## Avcı Savunma Sanayi Ticaret Ltd. Şti.

Başkent Bulvarı 14. Sokak, Özçelik İşmerkezi No: 4/77 Ostim, Ankara, TÜRKİYE  
Tel: +90.312 354 27 87 • Fax: +90.312 354 27 88  
info@avcisavunma.com.tr • www.avcisavunma.com.tr



Founded in 2008 in our country's security and defense needs and strategic solutions to the domestic defense industry to the use of new technologies, a principle we have to offer. Rich experience in machinery, trained personnel with technical, development and innovation to follow up implementation of the management and defense of our country to people in industrial policy, science, technology, investment in production to support our activities to continue. Manufacturing plants, ships and defense industry projects done for the automotive industry parts, aviation and aerospace industry demands tools and machine parts and military troops are needed alongside the other work is done.



# CONTACT INFORMATION



## **AYDIN YAZILIM** VE ELEKTRONİK SANAYİ A.Ş.



## **Aydın Yazılım ve Elektronik Sanayi A. Ş. (AYESAŞ)**

Karamanlılar Cad. No: 7 Organize Sanayi Bölgesi Sincan 06935 Ankara, TÜRKİYE  
Tel: +90.312 267 27 27 • Fax: +90 312 267 01 16  
info@ayesas.com • www.ayesas.com

AYESAŞ operates in the aerospace, defence and security sectors, providing advanced solutions in the business areas of C4I, avionics, electronics and electromechanical systems. Our broad range of capabilities includes products and services from design and development to build-to-print manufacturing solutions, such as tactical data communications, automated target detection and tracking, radar integration and automation, digital moving maps, multi-function consoles, wiring harnesses and rugged workstations.



## **Barış Elektrik Endüstrisi A. Ş.**

Esenboğa Yolu 23. Km. Akyurt, 06750 Ankara, TÜRKİYE  
Tel: +90.312 398 02 28 • Fax: +90.312 398 04 54  
baris@bariselektrik.com.tr • www.bariselektrik.com.tr

Barış was founded in 1979 for the production of transformers encapsulated in epoxy resin and silica powder, and develops composite products through Filament Winding, Resin Transfer Moulding (RTM), Hot Pressing and Hand Lay-up. Barış has been manufacturing composite tubes by resin injection into a closed mould since the early 1980s; and in 1989 the company moved to its current facilities in Ankara to concentrate mainly on defence projects. Since then, Barış has gained a reputation in the field of advanced composites in the Turkish defence sector, conforming to the AQAP Quality System in 1988 and upgrading to AQAP 2110 recently.

**Export Countries:** France, Germany and the US.



## **BMC Sanayi ve Ticaret A. Ş.**

Kemalpaşa Cad. No: 32 Pınarbaşı 32060 İzmir, TÜRKİYE  
Tel: +90.232 477 18 73 • Fax: +90.232 477 18 75  
savunma@bmc.com.tr • www.bmc.com.tr

BMC, a national company, produces Wheeled Tactical Vehicles (WTV), Aircraft Refuellers, Logistics Support Vehicles and Wheeled Armoured Vehicles (WAV). BMC possesses the ISO 9001:2000 Quality System Certificate, the AQAP-2110 Industrial Quality Assurance Certificate, the NATO Secret Facility Security Clearance Certificate and the National Secret Facility Security Clearance Certificate, as well as the Production License given by Turkish Ministry of National Defence. Additionally, BMC is registered in the NAMS (NATO Maintenance and Supply Agency) Source Mailing List.

BMC has just released its first (4x4) Multi-Purpose, Mine-Resistant Ambush-Protected Wheeled Armoured Vehicle, boasting a 15–18 personnel seating capacity, and high ballistic (STANAG 4569 up to Level 3) and mine (8kg TNT - STANAG 4569 up to Level 3a & 3b) protection levels.

In addition, BMC also has (4x4) 7–9 personnel capacity Armoured Personnel Carrier, Command Control Vehicle and Weapon Carrier Vehicles ready for production.

BMC is also involved in the modernisation of WAVs; and as such took on the modernisation of 302 BTR 60 (8x8) WAVs for Gendarmerie General Command in 1996, all of which have re-entered service.

# CONTACT INFORMATION



## C Tech Bilişim Teknolojileri Sanayi ve Ticaret A. Ş.

TÜBİTAK TEKSEB No: C-210 Gebze, Kocaeli, TÜRKİYE

Tel: +90.262 644 90 48 • Fax: +90.262 644 90 47

ctech@ctech.com.tr • www.ctech.com.tr • www.ctechsoft.com



CTech Bilişim Teknolojileri (C2Tech) is specialised in the design, development and system integration of:

- Secure Communication and Network Systems,
- RF Systems and Stealth (RCS) analysis, and
- Command-Control (C2) and Simulation Systems.

C2Tech has been involved in the design and development of custom solutions and products (both in software and hardware) in both the defence and information technologies (IT) sectors. At C2Tech, both international and military standards are internalised into the working infrastructure and are applied during the design and development of both our software and hardware products. On this front, C2Tech has worked on:

- Development of an X-Band secure satellite modem,
- Integration of security systems for wide-band internet superstructures,
- Development of an ADS-B base station, which is a new generation Air Traffic Control System.

## Dearsan Gemi İnşaat Sanayi A. Ş.

Postahane Mah. Rauf Orbay Cad. No.12 Tuzla, İstanbul, TÜRKİYE

Tel: +90.216 395 75 75 (Pbx) • Fax: +90.216 395 75 77

dearsan@dearsan.com • www.dearsan.com



Since its establishment in 1980 Dearsan Shipyard has built, fabricated, repaired, and modified numerous sea- and river-going vessels. Our shipyard is capable of building Aquila Tug Boats and Chemical Tankers up to 11,500DWT; and Dearsan is now the main contractor in a project for the construction of 16 New Type Patrol Boats after winning a tender launched by the Undersecretariat for Defence Industries (SSM) to meet a requirement of the Turkish Naval Forces.

In addition to our ship-building operations, our shipyard operates a commercial ship design department and combat systems design division for naval projects. The new type patrol boats that are currently under construction in our shipyard have been designed by our own combat system division.

Our shipyard contains 15,341.74m<sup>2</sup> of enclosed shipbuilding facilities, along with a further 15,870.96m<sup>2</sup> of open area, and a 3,000m<sup>2</sup> storage yard. Along with its well-appointed facilities and 126m-slipway, Dearsan is capable of building nine vessels at the same time. Dearsan has been granted the following certificates:

NATO Secret Facility Security Clearance Certificate, National Secret Facility Security Clearance Certificate, ISO 9001-2000.

## ETA Elektronik Tasarım ve Ticaret A. Ş.

ODTÜ İkizleri Zemin Kat B Blok Teknokent ODTÜ 06531 Ankara, TÜRKİYE

Tel: +90.312 210 16 16 (4 hat) • Fax: +90.312 210 16 13

info@etaint.com • www.etaint.com



Since 1984, ETA Inc. has been a trusted partner and a respected supplier of state-of-the-art products and high quality services to its customers. With many years of experience in the market, ETA Inc. offers a pool of engineering resources for hire, as well as application-specific turnkey solutions. Based from facilities in the Middle East Technical University Technopark, ETA Inc. has always been a research-based company.

ETA is a leading company in the provision of a broad range of IT services. It is specialised in providing custom software development, application software for computer-based training, custom simulation software, database applications and real-time embedded software for various platforms.

ETA is an ISO9001:2000 certified company. All of our software and hardware development activities result in products that conform to our customers' specific requirements.



# CONTACT INFORMATION



## ETC-IS A. Ş.

(Environmental Tectonics Corporation – Information System Bilgi İşlem Teknoloji A. Ş.)  
ODTÜ Teknokent Gümüş Bloklar A Blok, Suit-1, 06531 Ankara, TÜRKİYE  
Tel: +90.312 210 17 80 • Fax: +90.312 210 1784 • info@etcturkey.com.tr

ETC-IS was established in 2000, and since then has successfully completed a number of very important information systems projects. At the beginning of 2003, ETC-IS started focused its efforts on developing information system solutions for use during disaster management operations. As a result of this strategic decision, ETC-IS is now well on its way to becoming the centre of excellence in disaster management information system development.



## FIGES Computer Simulation Services in Physics and Geometry and Trade Inc.

Ulutek Teknoloji Geliştirme Bölgesi, Uludağ Üniv. Görükle Kmp, Nilüfer 16059 Bursa, TÜRKİYE  
Tel: +90.224 280 85 25 • Fax: +90.224 280 85 32  
info@figes.com.tr • www.figes.com.tr

FIGES is a leading engineering service company established in 1990 that now employs more than 80 people. The company provides advanced engineering services, consultancy, training and related software products to the research and product development departments of both domestic and international aerospace/defence and automotive industry companies.

With its highly qualified and scalable staff, which can cover a wide range of different expertise areas, FIGES offers innovative and advanced engineering solutions for air, land and naval applications in the following areas:

Design and Numerical Analysis:

- Design/CAD
- Structural Strength Analyses
- Computational Fluid Dynamics (CFD)
- Multi Body Dynamics (MBD)
- Blasting, Shock and Crash Analyses
- Vibration and Fatigue Analyses
- Heat Transfer Analyses
- Metal Forming Analyses
- Electrostatics & Electromagnetics
- Design Optimisation.



## FNSS Savunma Sistemleri A. Ş.

P.K. 37 - Gölbaşı, 06830 Ankara, TÜRKİYE  
Tel: +90.312 484 00 77 (20 hat) • Fax: +90.312 484 00 71 – 73  
info@fnss.com.tr • www.fnss.com.tr

FNSS Savunma Sistemleri (FNSS Defence Systems Inc.) is an Ankara-Turkey based joint venture company between Nuro Holding of Turkey and BAE Systems Land & Armaments.

**The main activity areas of FNSS are:**

- Design and production of Tracked Armored Combat Vehicles
- Design and production of Wheeled Armored Vehicles
- Design and production of Weapon Stations
- Modernization and Maintenance of aging Armored Vehicles
- Integrated Logistic Support

FNSS has AQAP-2110 Industrial Quality Assurance Level certificate from the Ministry of National Defence of Republic of Turkey and ISO 9001:2000 Quality Assurance certificate from Lloyd's of the United Kingdom.

# CONTACT INFORMATION



## Gantek Teknoloji Bilişim Çözümleri A. Ş.

Yeni Parseller Sokak No:20 K Binası Kat: 4-5 Kavacık 34805 İstanbul, TÜRKİYE  
Tel: +90.216 538 80 00 • Fax: +90.216 322 04 43  
info@gantek.com • www.gantek.com



Gantek Technologies is dedicated to the principles of corporate governance, boasting 22 years of experience in Information and Communication Technologies (ICT). Gantek provides solutions in Turkey and the region as a leading Systems Integrator; and has, for the last nine years, invested continuously in R&D, positioning the company as one of the most innovative ICT companies in the region. The company provides focused solutions such as, Number Portability, Revenue Maximisation and Value Added Services (VAS) for the telecommunications sector; Risk Management solutions for the finance sector; and various graphics applications for the defence sector. Gantek provides effective solutions based on its long-term collaboration with all mobile and fixed-line operators and the leading financial institutions in Turkey, along with the telecom operators in CIS countries. With a business volume that exceeds US\$56 Million, a highly professional workforce and key strategic partnerships, Gantek has become one of the fastest growing technology companies in Turkey, and as such has been quoted in Deloitte's Fast 50 Research List every year since its inception.

## Gate Elektronik Sanayi ve Ticaret A. Ş.

İstanbul Yolu, Ayaş Kavşağı 16. Km. No:1/A, Ergazi Yenimahalle Ankara, TÜRKİYE  
Tel: +90.312 257 07 37 • Fax: +90.312 257 23 00  
gate@gateelektronik.com.tr • www.gateelektronik.com.tr



Gate Elektronik San. ve Tic. has specialised in providing depot level on-site maintenance and repair to military/industrial/civil electronic systems, avionics, etc. since 1989, besides providing Maintenance Engineering Services, Test Programme Set Development & ATU Software Development Services, Technical Service, System Integration and Electronic Production Services. Gate Elektronik's recent points of focus have been on the A400M avionics test benches and test programme sets (TPS), the design and production of Jammer Systems, the National Remote Operated Vehicle (ROV), and the Integration & Maintenance and Repair of KU Band Satellite Systems.

Besides more than 2,500 local customers, Gate Elektronik is providing reliable engineering services to NAMS (NATO), and is exporting to such countries as France, Japan, Norway, Russian Federation, United Arab Emirates, United Kingdom and the United States.

## Genetlab Bilgi Teknolojileri Sanayi ve Ticaret A. Ş.

Kayışdağı Cad. Karaman Çiftlik Yolu Kar Plaza D Blok K: 3 Kadıköy 34752 İstanbul, TÜRKİYE  
Tel: +90.216 573 00 85 • Fax: +90.216 469 85 07  
info@genetlab.com • www.genetlab.com



Genetlab® was founded in 2005 as a research and development company that works in the fields of defence and homeland security. The company focuses on next generation wireless sensor and actuator networks, and has completed and fielded many research and development projects; becoming a leading research and development company in its field.

The first fielded Genetlab® product is "SenseNode®" wireless sensor node, which is being used in the projects of several of Turkey's universities, such as Istanbul Technical University, Boğaziçi University, Istanbul University and the Middle East Technical University. Other products, such as, Sensor Networks for Intrusion Detection (TEDAS®), Sensor Networks for Pipeline Security (BODAS®), and Tactical Sensor Networks (TADAS®) have also been completed, and have entered into use in, for example, filling stations in Aliğa. More info about these products can be found in the related pages of the Genetlab® website.



## Girsan Makina ve Hafif Silah San. Tic. Ltd. Şti.

Batlama Deresi Mevkii Sunta Sok. No: 19 Giresun, TÜRKİYE

Tel : +90.454 215 29 31 • Fax : +90.454 215 39 28

yavuz@yavuz16.com • info@yavuz16.com • www.yavuz16.com

Girsan Gun Industry was established in 1994 to satisfy the gun and armament requirements of Turkish Police and Armed Forces, incorporating high reliability and quality.

The quality of Girsan's Yavuz 16 pistol, which is produced to NATO standards, has been proven in the evaluation tests carried out for both national and international tenders.

Girsan produces the Yavuz 16 pistol family, which is noted for its high firepower. The Yavuz has a 15+1 cartridge capacity, firing 9mm x 19 Parabellum and 9mm x 21 IMI cartridges. Girsan also produces pistols of different calibres, such as the 7.65mm, .40S&W, .45 ACP and .380 ACP (short nine).

The Girsan Yavuz 16 Pistol Family consists of the Compact M.C., Regard M.C., Zirve, Tuğra, Bora, Bora Light, MC 21, MC 23, MC 13, MC 14, MC T 40 and MC 23.45. Yavuz 16 pistols in wide use by the Turkish Armed Forces, as well as being the only local brand in use as a staff gun of the Turkish Police. Yavuz 16 pistol is chosen as one of the staff guns by Malaysian Police Department.

Girsan currently exports to the United States, Italy, a number of South American countries, as well as to countries in the Far East and Central Asia.



## Global Teknik Elek. Müh. Hav. San. Tic. A. Ş.

1. Organize Sanayi Bölgesi Azerbaycan Cad. 8. Sk. No: 80 Sincan, Ankara, TÜRKİYE

Tel: +90.312 267 40 50 • Fax: +90.312 267 40 55

info@globalteknik.com.tr • www.globalteknik.com.tr

Global Teknik is specialised in the design and manufacture of unmanned vehicles for air, land and sea applications; software design and manufacture of X-Ray Systems for border security applications; electronics and mechanical design; system integration; aviation; homeland security, automation and communication technologies.

Global Teknik's latest products, which are based on its advanced technologies, are called the Mini Unmanned Air Vehicle (GloblHA) and the Unmanned Surface Vehicle. These are being produced to satisfy domestic requirements, and are following a parallel path to meet the demands of the world market from Global Teknik's facilities in the Ankara 1st Organised Industrial Zone, which have NATO Facility Security Certification as well as NATO clearances.

Global Teknik has begun placing more emphasis on its studies into aviation as of 2009, having been granted the project to "Fight Forest Fires from the Air for a period of 5 years" by the Ministry of Environment and Forestry. As such, the company is enjoying great pride in serving Turkey with 16 helicopters in the scope of the project.

Global Teknik is certified as a military spare parts and Mini UAV supplier to NATO/NAMSA with NCage Code: T6715, and is also a member of the International Unmanned Vehicle System Producers Association and the Defence Industry Manufacturers Association (SaSaD).



## Göktürk Mühendislik Endüstriyel Ürünler İmalat İth. İhr. Paz. Tic. Ltd. Şti.

Batı Sitesi Mah. Gersan Sanayi Sitesi Tahsin Kahraman Cad. No: 82 Ergazi Ankara, TÜRKİYE

Tel: +90.312 255 51 52 • Fax: +90.312 255 51 63

info@gokturkmuhendislik.com • www.gokturkmuhendislik.com

Operating out of its facilities in Ankara, Göktürk Engineering has been active in the defence sector since its establishment in 1996. In its first three years following establishment, the company specialised in electro-optical systems, particularly in night vision goggles, producing or integrating electronic and mechanical parts of night vision systems; and now aims to meet a wide range of technological needs of the Turkish Armed Forces.

Göktürk Engineering possesses the ISO 9001:2000 Quality Management System Certificate, as well as a facility security clearance certificate at National Secret level from the Turkish Ministry of National Defence; and at NATO Secret level from the NATO and Euro-Atlantic Infrastructure and Logistics Department. It is also a member of the Turkish-American Trade and Industry Chamber.



# CONTACT INFORMATION



## Güvenli Yaşam İş Güvenliği San. Tic. Ltd. Şti.

İler Sokak 1/1 Mebusevleri 06580 Ankara, TÜRKİYE  
Tel: +90.312 215 50 71 • Fax: +90.312 212 66 77  
guvenliyasam@guvenliyasam.com



Güvenli Yaşam is Turkey's largest industrial enterprise in its field of activity: the manufacture of personal defence and protection equipment for military and law enforcement units. Güvenli Yaşam was established back in 1987, and has since then has continued to develop its products in accordance with the requirements and demands of modernisation programmes in both Turkey and abroad by increasing capacity.

## Hava Elektronik Sanayi ve Ticaret A. Ş.

Mustafa Kemal Mahallesi, Eskişehir Yolu 7. Km. 06520 Ankara, TÜRKİYE  
Tel: +90.312 219 57 87 • Fax: +90.312 219 57 97  
info@havelsan.com.tr • www.havelsan.com.tr



Havelsan designs and develops turnkey solutions according to customer requirements in C4ISR (Command, Control, Communication, Computer, Intelligence, Surveillance, Reconnaissance), Naval Combat Management, Air & Defence, Management Information, Simulation and Training, Homeland Security and Energy Management technologies and Systems.

**C4ISR Systems:** Havelsan develops national and unique solutions, providing technical support in the field of system engineering, system integration, testing and training in order to meet the requirements of armed forces.

**Simulation and Training Systems:** Havelsan is one of the world's best-known producers of fixed- and rotary-wing aircraft simulators; and can provide turnkey solutions in the design, modification and maintenance of simulation technologies and simulation training facilities of air, land or naval platforms.

**Homeland Security Systems:** Havelsan has met the Homeland Security requirements of both military and civilian organisations.

## Havelsan Teknoloji Radar A. Ş.

Çankırı Yolu 7. Km. Akyurt 06750 Ankara, TÜRKİYE  
Tel: +90.312 8475130 Fax: +90.312 8475138  
htr@htr.com.tr • www.htr.com.tr



Havelsan Teknoloji Radar Sanayi ve Ticaret Inc. (HTR) was founded in 1990 as a Turkish-French joint venture for the production of TRS 22XX Long-Range Mobile Air Surveillance Radars. With the transfer of the shares of Thales to Havelsan Inc. in February 2001, HTR became a national company.

Besides its radar system engineering capabilities, HTR has been contributing to several Software Development, Harness-Cabling and Integrated Security System Projects, accomplishing all these tasks according to stringent quality standards.

**HTR possesses the following certificates:**

ISO 9001:2000 Quality Assurance Certificate  
AQAP 2110 Quality Assurance Certificate  
NATO Secret Level Facility Security Clearance  
National Secret Level Facility Security Clearance.



## İNTA Uzay Sistemleri İletişim A. Ş.

Haymana Yolu 12. Km. 06830, Gölbaşı Ankara, TÜRKİYE  
Tel: + 90.312 612 23 70 • Fax: + 90.312 612 23 90  
info@spaceturk.com.tr • www.spaceturk.com.tr

INTA Spaceturk, which was established in 2001, is a pioneering and leading technology company in space-based remote sensing technologies in the Eurasia region. INTA Spaceturk began its operations by direct tasking the GeoEye 82cm-resolution Ikonos imaging satellite from its satellite ground station in Ankara to produce various imagery products. As a Master Channel Partner of GeoEye, the company continues to be the exclusive source of Ikonos, as well as the new 50cm resolution GeoEye-1, imagery products in Turkey, Azerbaijan and Georgia. With an extensive imagery archive of the region, the company distributes imagery products at 50cm, 1m and 2.5m resolutions. With its ground station, other advanced technologies and expert personnel, INTA Spaceturk transforms its programme management, software, Geographical Information Systems and defence applications development efforts into value added products and services based on satellite imagery and communications.



## İşbir Elektrik Sanayi A. Ş.

Yeni İzmir Yolu 6. Km. 10050, Merkez, Balıkesir, TÜRKİYE  
Tel: +90.266 283 00 50 • Fax: +90.266 283 00 66-67  
isbir@isbirelektrik.com.tr • www.isbirelektrik.com.tr

İşbir Elektrik Sanayi was established in 1977 to produce generators as its main field of business, but also to manufacture panels and diesel gensets. The company carries out its current business activities from its Balıkesir Factory, which has a total enclosed area of 12,000m<sup>2</sup> on an open area of 20,000m<sup>2</sup>

Producing generators since 1981, the company has a proven track record, and thus has gained a reputation in this area of specialisation as a pioneer of technology in the production of generators, all based on its profound experience and state-of-the-art technologies. İşbir is one of the best-known generator producers in both Turkey and its geographical region, with the ability to provide an entire range of gensets in combination with generators. The current production line of İşbir Elektrik includes:

- Stationary and Mobile Gensets,
- Marine Type Gensets,
- Railroad Carriage Gensets,
- Dual Gensets.



## İstanbul Denizcilik Gemi İnşa Sanayi ve Ticaret A. Ş.

Tuzla Tersaneler Bölgesi No:28 Tuzla - İstanbul, TÜRKİYE  
Tel: +90.216 446 93 00 • Fax: +90.216 446 93 08  
www.istanbulshipyard.com

İstanbul Shipyard is the leading company in Turkey's shipbuilding industry, backed by a strong corporate identity, infrastructure and experience in projects developed to the latest international standards. As a subsidiary of SNR Holding, İstanbul Shipyard has the justified pride of being the most in-demand shipyard for the construction of naval and commercial off-shore vessels. Its partnership with some of SNR Holding's other subsidiaries, such as Yıldırım Shipyard and ABS Metal Factory, İstanbul Shipyard has an annual steel processing capacity of 13,200 tonnes with five slipways.

The shipyard completed recently the modernisation of four SAR boats for the Turkish Coast Guard, delivering the finished platforms not only earlier than scheduled, but also with a higher performance than contracted – providing testament to the shipyard's reliability and quality.

İstanbul Shipyard is interested in undertaking all kinds of naval projects, and is looking to diversify in its approach by further raising the contribution of its experienced in-house design office to projects. The shipyard is the first in Turkey to build chemical tankers with duplex stainless steel cargo tanks, and has also delivered two offshore ROV Survey Vessels to a Norwegian company with remarkable success.

# CONTACT INFORMATION



## KaTron Savunma Uzay ve Simülasyon Teknolojileri A. Ş.



Ünalan Mah. Ayazma Cad., Çamlıca İş Merkezi, A Blok Kat 2, Üsküdar 34700 İstanbul, TÜRKİYE

Tel: +90.216 556 05 00 • Fax: +90.216 556 11 88

info@katron.com.tr • www.katron.com.tr



KaTron is one of the fastest growing technology companies in Turkey. with headquarters in İstanbul and offices in Ankara and Dubai. KaTron is a Koc Information Group company of the Koc Holding, which reported more than US\$43 Billion in consolidated revenues in 2008, with approximately 75,000 employees and 12,000 dealers, agencies and after-sales service providers. KaTron is unique in its field in terms of software development, mechanical design and development, image generation, database generation and systems integration capabilities, allowing the company to provide a total turn-key solution for any simulation need possible.

KaTron offers solutions in a wide variety of simulation applications, ranging from engineering, flight simulators and part task trainers to virtual maintenance trainers. The mission of KaTron is to develop leading edge technology simulation products for aerospace, defence, aviation, naval, automotive and transportation corporations, helping them to reach excellent real world performances through virtual world practices.

## Koç Bilgi ve Savunma Teknolojileri A. Ş.



Koç Bilgi ve Savunma Teknolojileri A. Ş. Teknopark 06531 Ankara, TÜRKİYE

Tel: +90.312 210 17 30

www.kocsavunma.com



Koç Bilgi ve Savunma Teknolojileri was established on May 29, 2002, but has only been under its current name since January 9, 2007. Koç Bilgi ve Savunma Teknolojileri's involvement in the defence sector is mainly in software development, acoustics, and naval combat and electronics systems.

**Software Development:** Koç Bilgi ve Savunma Teknolojileri, having been certified for CMMI-3, is involved in a wide range of software development activities, including the Turkish Armed Forces Information System, Message Distribution System, Convoy Simulation, Link Systems Simulation and Acoustics Systems Software projects.

**Acoustics:** Koç Bilgi ve Savunma Teknolojileri directs its technological studies to commercial acoustic system production, maximising contributions to the domestic economy. The company has expertise in acoustic signal processing, transmitter and receiver design, acoustic environment modelling and analyses, and acoustic noise measurement and analyses.

**Naval Combat and Electronics Systems:** The company is currently in the process of establishing and developing the infrastructure to provide services in combat and electronic systems design, procurement, integration and test activities of the naval ships built in civilian shipyards.

## Koç Consulting Ltd. Şti.



Cyberpark, Cyberplaza B, 7. Floor, Bilkent, 06800 Ankara, TÜRKİYE

Tel: + 90. 312 265 06 10 • Fax: + 90. 312 265 06 12

info@koc-consulting.com • www.koc-consulting.com



Koç Consulting was established 2004 in Munich/Germany and in 2006 in Ankara to provide management and engineering consulting services to our customers, from industry, national Ministries of Defence, national and international institutions in Europe and Turkey to develop and implement innovative aerospace and defence strategies and projects.

The mission of Koç Consulting is to support international aerospace and defence companies with know-how and expertise for the Turkish market, and to foster cooperation between Turkish and international aerospace and defence industries.

Koç Consulting addresses all fields of the sector: military & civilian aircraft, satellites, launchers, missiles, defence systems and aerospace services, and provides comprehensive consultancy services. Our consultants have held senior positions in major aerospace and defence companies and have extensive management and engineering expertise. Our consultancy activities are concentrated on the following topics: Executive Management, Business Development, Market Entry Strategies, Acquisition Support, Development of Company Strategies, Technological Roadmaps, Offset Management, International Project Management, Proposal Management, R&D Project Development, RFQ & RFP Development and Engineering.





## Meteksan Savunma Sanayi A. Ş.

Beytepe Köyü Yolu No: 3 Bilkent 06800 Ankara, TÜRKİYE  
Tel: +90.312 266 15 20 • Fax: +90.312 266 13 93  
www.meteksansavunma.com.tr

Meteksan Defence Industry Inc., an investment of Bilkent Holding, has a mission to provide local inputs to Turkish defence industry while offering hi-tech solutions for the Turkish Armed Forces. The company aspires to compete internationally with competitive products, and to create an ideal basis for international programmes as a much sought after business partner, both for local and international cooperation. In partnership with the prestigious Bilkent University, Meteksan intends to create an innovative and committed business model, making the most of the scientific and academic heritage of its partner.

As for Meteksan Defence's vision and values, the company aims to be a global competitor, striving for perfection and innovation, setting the standards in its field of operation in parallel with the vision of the Group; rapidly adapting to technological advancements and directing change and progress with its interactive organisation, in which transparency is a must and customer satisfaction is of utmost importance.

Meteksan Defence Industries, located at the Bilkent Cyberpark, is involved in the fields of combat area recognition and identification; reconnaissance; intelligence and surveillance systems; (C4I) systems and search and rescue systems etc.



## Microdis Elektronik San. ve Tic. Ltd. Şti.

Eskişehir Yolu 55. Km. Polatlı, Ankara, TÜRKİYE  
Tel: +90.312 646 50 60 • Fax: +90.312 646 50 66  
ihracat@microdis.com

Microdis is a young, dynamic and rapidly-developing company that was founded in 2003 to provide a reliable, innovative and on-time service to producers, R&D departments and wholesale mid-level companies in the Turkish market in the supply of electronic components.

The rapid rise in the activities of terrorists around the world has been accompanied by a rise in unprecedented techniques in the way attacks are carried out. The use of conventional arms and bombs has been replaced with methods that require detection through the use of technological expertise and equipment.

Microdis opens new horizons through products created by defence industries, and acts according to its philosophy of 'You Think, We Design'. Our priority aim is to fight against these types of attacks through the use of technology to protect security forces, civilians and property from damage or loss. Within this concept, Microdis has decided to focus efforts into defence and security issues, and so has started to develop different types of jammers – radio frequency preventing devices to counter remote controlled explosives for different applications, such as vehicles, manpacks, building protection, convoy protection, GSM and GSM wireless.



## MiKES Microwave Electronics Systems, Inc.

Çankırı Yolu 5. Km. Akyurt 06750 Ankara, TÜRKİYE  
Tel: +90.312 847 51 00 • Fax: +90.312-847 51 14  
info@mikes.com.tr • www.mikes.com.tr

Established in 1987, MiKES is active in the area of defence electronics and electronic warfare with 100% Turkish owned shares; of which 96% are owned by Aselsan, 3% by the SSM and 1% by AselsanNet. MiKES is a value-oriented engineering and manufacturing house focusing on defence programmes with its high qualified personnel experienced in design, development, procurement, manufacturing, integration, testing and logistic support of Electronic Warfare (EW) and RF Microwave Systems, Subsystems and Support/Test Equipment in both hardware and software.

MiKES' facility has an enclosed area of 7,000m<sup>2</sup>, including a TEMPEST protected software lab. The facility and the procedures followed comply with the requirements of the Turkish Defence Industry Security Policy and are approved for SECRET level processing. MiKES' Quality System complies with NATO and Military Standards. Since 1989, MiKES has successfully completed various programmes for the Turkish Armed Forces (TAF)/Turkish Ministry of National Defence (TMND) and international companies. The accumulated capabilities, technological background and experience in defence electronics, gained as a result of 20 years of expertise in the sector, enables MiKES to provide reliable, effective and high performance system solutions to the ever-changing operational requirements of the armed forces.

# CONTACT INFORMATION



## MilSOFT Yazılım Teknolojileri A. Ş.

Teknokent ODTÜ 06531 Ankara, TÜRKİYE

Tel: +90.312 292 30 00 • Fax: +90.312 210 00 32

MilSOFT@MilSOFT.com.tr • www.MilSOFT.com.tr



MilSOFT is a 100% private Turkish company that is specialised in system integration and software development, with a business presence and interest in the defence sector. With more than 240 employees, MilSOFT conducts operations in its own R&D centre in the METU Technopolis in Ankara; and also in the TüBİTAK Technological Free Zone in İstanbul; developing products using its system and software engineering infrastructure to ensure customer satisfaction in terms of both cost and schedule. MilSOFT was the first company in Europe to achieve CMMI Level 5, and stands as one of the first 20 companies throughout the world to achieve Level 5 according to the CMMI-DEV version 1.2 rules. In addition, MilSOFT possesses both NATO AQAP-160 and TS-EN-ISO 9001:2000 certificates.

MilSOFT's interest areas are as follows: C4I, Data Links and Messaging, Image Exploitation Systems, Electronic Warfare, Modelling and Simulation, Embedded Systems and HW manufacturing through subcontract management.

MilSOFT has developed and exported critical software solutions to companies in France, Germany, Israel, the UK and the US.

## Makina ve Kimya Endüstrisi Kurumu

Genel Müdürlüğü Degol Cad. No: 4 Tandoğan 06330 Ankara, TÜRKİYE

Tel: +90.312 296 10 00 • Fax: +90.312 222 22 41

mkekexport@mkek.gov.tr • www.mkek.gov.tr



MKE, with a history that dates back to the 15th century, is a leading company in the Turkish defence sector, keeping up to date with modern technology as a priority. The company has been a main supplier of the Turkish Armed Forces (TAF) under various names since its establishment, and gained its current legal status as a state company in 1950. With a large product range, MKE not only serves TAF, but also exports to more than 40 countries.

Working out of 10 modern factories, MKE offers a range of products in four main groups: Ammunition, Rocket, Weapons, Explosives/Powders and Pyrotechnic Products

MKE is proud to have been awarded with the latest AQAP and ISO certificates for all of its facilities.

Being a dynamic meeting point of experience, knowledge and technology, MKE has gained its own leading position in the Turkish defence sector, and will continue moving forward in the global market.

## MTU Motor Türbin Sanayi ve Ticaret A. Ş.

Ömerli Caddesi No: 5 Hadimköy, İstanbul, TÜRKİYE

Tel: +90.212 798 27 10 • Fax: +90.212 798 27 92

mtu-tr@mtu-online.com • www.mtu.com.tr • www.mtu-online.com



Alongside Detroit Diesel, MTU is the core brand of Tognum. MTU Friedrichshafen GmbH supplies diesel engines and complete drive systems for ships, heavy land and rail vehicles, industrial applications and decentralised power generation plants. With diesel engines ranging from 20–9,100 kW and gas turbines, MTU's line of products is one of the most modern and wide-ranging in the sector. For the control and monitoring of its engines and drive plants, the company also develops and manufactures its own custom-tailored electronic systems.

Tognum, as one of the world's leading suppliers of high-speed diesel engines and complete propulsion systems for ships, heavy land and rail vehicles, industrial drive systems and decentralised power plants, is set-up in the two divisions: MTU Engines and Tognum Onsite Energy Systems and Components. Its product portfolio includes diesel engines in the 20–9,100 kW power range, gas engine systems, gas turbines and fuel cells, and is one of the most modern and comprehensive in its sector. In addition, the group develops and manufactures custom-made electronic control and monitoring systems for its engines and propulsion systems.



## NORTEL NETAŞ



## Nortel Networks Netaş Telekomünikasyon A. Ş.

Alemdağ Cad.No: 171 Ümraniye 34768 İstanbul, TÜRKİYE  
Tel: +90.216 522 20 00 • Fax: +90.216 522 22 22  
webmaster@netas.com.tr • www.nortelnetas.com.tr

Nortel Netaş was established to provide end-to-end innovative services and solutions to customers in the deployment and operation of communications networks.

On the back of an R&D programme that was launched in 1973 as the company's driving force, Nortel Netaş has deployed integrated networks and infrastructures for voice, data and video communications for numerous service providers and enterprises, and has evolved into a global force in the provision of telecommunication solutions through its dedicated Technology Group. The company also plays a leading role in the modernisation of the Turkish defence telecommunications network, providing bespoke systems and products to meet the needs of the Turkish Armed Forces.

The Nortel Netaş Technology Group, employing 1,000 highly qualified and experienced engineers, provides a wide range of voice, data, optical and wireless solutions to its customers; while also designing 3G wireline solutions; offering services to wireless, unified, metro Ethernet and optical networks for Nortel's global next generation carrier customers, and developing software for more than 30 global operators. Today, 31.87% of Nortel Netaş shares are traded on the Istanbul Stock Exchange; with the bulk of the shares held by Nortel Networks (53.13%) and the Turkish Armed Forces Foundation (15%).



## Nurol Makina ve Sanayi A. Ş.

Ankara Organize Sanayi Bölgesi Avrupa Hun Bul. No: 6 Sincan 06935 Ankara, TÜRKİYE  
Tel: +90.312 267 05 30 / 248 • Fax: +90.312 267 01 55  
marketing@nurolmakina.com.tr • www.nurolmakina.com.tr

Nurol Makina ve Sanayi/Machinery Division was founded in 1976 to construct turnkey industrial plants and to carry out large scale contracting in steel construction and machinery production. After a while, our company branched out into the defence industry sector, while continuing with its core capabilities, and established facilities in the Sincan Ankara Industrial Zone in 1992. To date, our company has carried out several important projects, operating out of enclosed facilities measuring 17,000m<sup>2</sup>, on an overall area of 50,000m<sup>2</sup>, and with a workforce of 331 qualified and experienced personnel.

### Nurol Makina ve Sanayi A.Ş. possesses the following certificates:

- AQAP-2110 Industrial Quality Assurance Level Certificate – approved by the Ministry of National Defence
- ISO-EN-9001-2000 Quality Management System Certificate – approved by the Turkish Standards Institution
- National Facility Security Certificate (National Secret secrecy level) – approved by the Ministry of National Defence
- Production Permission Certificate – approved by the Ministry of National Defence.

**Export Countries:** Azerbaijan, Georgia, Kazakhstan, Malaysia, Saudi Arabia, United Arab Emirates and Zimbabwe.

## Otokar



## Otokar Otobüs Karoseri Sanayii A. Ş.

Aydınevler Mh. Dumlupınar Cd. No: 24 A Blok Küçükyalı 34855 İstanbul, TÜRKİYE  
Tel: +90.216 489 29 50 • Fax: +90.216 489 29 67  
kyl@otokar.com.tr • arf@otokar.com.tr • www.otokar.com.tr

Otokar has been offering tailored solutions according to the needs of its customers using its own technology, design and applications since 1963. The company designs and manufactures 4x4 tactical wheeled vehicles and tactical armoured vehicles, in addition to mini- and midi-buses and semi-trailers. Otokar employs a workforce of 1,200 at its 552,000m<sup>2</sup> plant in Sakarya. Along with its design and development capabilities Otokar also enjoys the distinct advantage of operating its own integrated manufacturing technology; while the flexibility of its manufacturing processes is another major asset.

Otokar is renowned for its wide range of Armoured Personnel Carriers, Border Security Vehicles, Reconnaissance & Surveillance Vehicles, Weapon Platforms, Mine-Resistant Troop Carriers, NBC Reconnaissance Vehicles, Medical Evacuation Vehicles and Ambulances. To date, Otokar has produced more than 25,000 vehicles for more than 15 countries. Over the years, the proven ability and multi-role capabilities of Otokar's vehicles have secured the company's position as the main supplier to the Turkish Armed Forces, and the overall export leader of the Turkish defence sector. The company has been appointed as prime contractor for Turkey's First National Battle Tank Project.



# CONTACT INFORMATION



## Öztek Tekstil Terbiye Tesisleri San. ve Tic. A. Ş.

Misinli Kavşağı 59860 Çorlu, Tekirdağ, TÜRKİYE  
Tel: +90.282 675 14 14 • Fax: +90 282 675 14 00  
oztektekstil@oztektekstil.com.tr • www.oztektekstil.com.tr



Spectra-Öztek Textile Printing and Dyeing Industries Inc., located in the city of Tekirdağ in Thrace/Turkey, was first established in 1995 and is presently processing 3 Million metres/month of dyed, printed, finished, coated and laminated textiles.

SPECTRA® Öztek Textile carries out its own R&D activities, which have resulted in the creation of such specialty products as C.B.R.N. Suit Fabrics (protection against nuclear biological and chemical warfare), Tex-Therm FIR-Free Suit Fabrics (protection from thermal detection), EMI-Shielding fabrics, extreme cold weather fabrics, NIR-Night Vision-free suit fabrics, non-flammable pilot suit fabrics, anti-bacterial fabrics, Ghillie suits, breathable fabrics, anti-mosquito fabrics, parachute fabrics, tent fabrics, tactical webbing fabrics, rucksack fabrics, medical fabrics, and multi-ply protective fabrics for military, health and sporting applications, among others.

Complying to the needs of each individual customer with quality products and competitive advantages, respect to environment, and fair play and good business ethics are the backbone of Öztek Inc.'s corporate philosophy. 'Better protection, better comfort, for better living through Öztek Technical Textiles'.

## Öztiryakiler Madeni Eşya Sanayi ve Ticaret A. Ş.

Cumhuriyet Mah. Eski Hadimkoy yolu, No:37 Büyükçekmece 34900 İstanbul, TÜRKİYE  
Tel: +90.212 886 78 10 / 11 • Fax: +90.212 886 62 36  
export@oztiryakiler.com.tr • www.oztiryakiler.com.tr



Öztiryakiler is a manufacturing company that is involved in the design, sale and service of industrial kitchen appliances and equipment. A family owned company, Öztiryakiler has over 60 years of experience in its field, with a product range of over 3,000 different items and exports to over 102 countries in five continents.

Öztiryakiler has been an industry leader in Turkey for many years; presenting OZTI, our growing brand, to the global market. Aside from its own product line, Öztiryakiler has also become the primary distributor of many well known international brands for the Turkish market.

**Product Groups:** Field Kitchens, Gas and Electrical Main Kitchen Appliances, Sanitary and Stainless Steel Medical Equipment, Cold Units, Dishwashers, Mixers, Pastry Equipment, Table and Chair Sets, Stainless Steel Pots & Pans and Service Trolleys.

## PTS Textile Industry & Trading Inc.

Dereboyu Cad. Çalışkan Sk. No: 4 Halkalı, Küçükçekmece 34303 İstanbul, TÜRKİYE  
Tel: +90.212 473 01 00 • Fax: +90.212 693 65 41  
www.pts.com.tr



PTS has been engaged in the production of technical textiles for military and civil use since its establishment in 1996. The high quality products of PTS conform to EN ISO 9001:2000.

PTS operates out of a head office located in Istanbul, very close to Istanbul International Airport, and has its modern production facilities in the Adapazarı and Yozgat Industrial Zones. PTS also has a liaison office in Ankara.

PTS places great importance in quality, both before and during production, and has a textile laboratory equipped with the latest technologies.

## CONTACT INFORMATION



**RMK MARINE**  
NAVAL SHIPS YACHTS



### RMK Marine Gemi Yapım Sanayii ve Deniz Taşımacılığı İşletmesi A. Ş.

İçmeler Mevkii Özel Sektör Tersaneler Bölgesi Tuzla 34944 İstanbul, TÜRKİYE

Tel: +90.216 581 33 00 • Fax: +90.216 395 45 82

info@rmkmarine.com.tr • www.rmkmarine.com.tr

RMK Marine is the leading company in Turkish shipbuilding, a title it has attained due to its specialist personnel in design and production, its programme management organisation and skills, its ship building infrastructure, its corporate profile and its record in the building of ships to international standards. Following the company's integration into the Koç Holding in 1997, RMK Marine has been enlarging its business volume, both in domestic and international markets, with turnkey business solutions. RMK Marine can provide a wide range of ships naval vessels, tailor-made oil/chemical/stainless steel tankers, tug boats, offshore supply vessels and super yachts, all to proven high quality

RMK Marine utilises local industry to the greatest extent possible, and aims to increase exports of its naval platforms. Having built confidence with the delivery of two logistic support ships to the Turkish Navy in 2000, RMK Marine was charged with leading the Search and Rescue Vessel Programme (four ships) in 2007, which was the biggest naval shipbuilding programme ever contracted to private industry in Turkey.

**roket**san



### ROKETSAN, Missiles Industries Inc.

Ankara-Samsun Karayolu 40. Km. Elmadağ 06780 Ankara, TÜRKİYE

Tel: +90.312 863 42 00 • Fax: +90.312 863 42 08

marketing@roketan.com.tr • www.roketan.com.tr

Roketsan Missiles Industries Inc. was established upon a decision of the Turkish Defence Industry Executive Committee in 1988 to lead the national rocket and missile research and production programmes. The company is composed of leading Turkish Government and Private shareholders and currently has around 750 employees in its modern facilities.

Roketsan has led the way in the design and production of 107mm, 122mm and 300mm Multi Barrel Rocket Launcher Systems and their ammunition. The TR-107 and TR-122 series rockets have the longest range within their class: 11km and 40km, respectively. The 300mm Multi-Barrel Rocket Launcher is the ultimate long-range solution that Roketsan offers. It possesses a maximum range of some 100km. The TR-122 family of munitions is in service with the Turkish Armed Forces as well as those of the United Arab Emirates (UAE). Roketsan is also offering customers full services in the upgrading, modernisation and overhaul of legacy rocket and missile weapon systems.

**CANIK55**



### Samsun Yurt Savunma Sanayi ve Ticaret A. Ş.

Organize Sanayi Bölgesi No: 28 Kutlukent, Samsun, TÜRKİYE

Tel: +90.362 266 66 71 • Fax: +90.362 266 66 72

samsun@canik55.com • www.canik55.com

Samsun Yurt Savunma Sanayi ve Ticaret joined the Eastern Black Sea Weapons Project in 1998 with the main mission of providing drafting and technical drawing services, moulds, apparatus, gauges and special tool drawings, and the production of these necessary elements as required under the project chosen by the Mechanical and Chemical Industry Corporation (MCIC). Our company possesses the ISO 9000 Certificate and also has the Facility Security Certificate, the Production Permit Certificate for pistol manufacturing and the AQAP 2120 certificate, all of which have been provided by the Ministry of National Defence. Approximately 35,000 pistols have been produced by our company under the Canik 55 brand, which is available on the world market. In addition to pistol production, our company also manufactures machine gun and rifle parts, and supports the local defence industry in a number of different projects.

# CONTACT INFORMATION



## Sarsılmaz Silah Sanayi A. Ş.

Nargileci Sokak No 4, Mercan Eminönü 34116 İstanbul, TÜRKİYE  
Tel: +90.212 513 35 07 • Fax: +90.212 511 19 99  
sarsilmaz@sarsilmaz.com • www.sarsilmaz.com

**SARSILMAZ**



Sarsılmaz was established in Turkey at the end of the 1800s by Abdülatif. Its drive for innovation has always kept the constant search for “the new” as the company’s production policy.

Sarsılmaz is the largest privately-owned establishment in Turkey, producing every kind of hunting shotgun and pistol at its integrated facilities using automation technology.

The factory is located in Duzce, Kaynasli on a total area of 100,000m<sup>2</sup>, with 35,000m<sup>2</sup> of covered facilities. Its production policy is especially considerate of ecological concerns; and as such Sarsılmaz has a unique profile in the industry.

Production is carried out using CAD/CAM systems and CNC technology. Sarsılmaz’s facilities are equipped with the most up-to-date technology, which is why the plant is ranked among the top three factories in Europe.

While Sarsılmaz makes most of its products for export, its high performance in Ministry of National Defence tenders has proven that its products are the weapon of choice of the Turkish Armed Forces.

## Savar Kompozit Balistik Malzeme San. Tic. Ltd. Şti.

Serbest Bölge No: 1 38070 Kayseri, TÜRKİYE  
Tel: +90.352 311 50 84, 321 1159 • Fax: +90.352 311 50 88, 321 1158  
savarbalistik@savarbalistik.com.tr • www.savarbalistik.com.tr



Our firm was founded in the Kayseri Industrial Zone in 1997, and moved production units to a new factory building in the Kayseri free trade zone in 2003 to accommodate the increasing manufacturing demands. The Head Office is currently situated on the 11th street, number 24, of the Industrial Zone.

We are still the only company producing ballistic protective helmets and ballistic protective shields in Turkey; and the ballistic personnel protective products and armoured equipment currently in use by the Turkish Armed Forces (TAF) are part of our company’s product range.

Our company aims to meet the needs of TAF with the domestic products, and carries out both R&D and manufacturing with this aim in mind. For the future, our company is working to secure a good position for Turkish defence industry products in the international marketplace.

## Savronik Elektronik Sanayi ve Ticaret A. Ş.

Organize Sanayi Bölgesi 10. Cadde Eskişehir, TÜRKİYE  
Tel: +90.222 236 15 90 • Fax: +90.222 236 15 89  
savronik@savronik.com.tr • www.savronik.com.tr



**Savronik A.Ş.**



Savronik was established in 1986 to operate in the field of defence electronics, with the aim of supporting the government’s attempt to create a stronger defence industry.

With this aim in mind, Savronik has developed as a company with its own resources that places emphasis on engineering infrastructure, based on R&D, that works to satisfy the requirements of Turkey’s defence industry by: investing in human resources, developing applicable and viable technologies for national solutions, and fulfilling the domestic industry’s needs.

Instead of focusing production on products of foreign origin, Savronik has been accumulating systems of its own design, growing the necessary dedicated expertise and engineering capabilities as alternatives for meeting the needs of national defence, and can truly be seen as an engineering firm offering original solutions.

Besides meeting national defence requirements, Savronik has also extended its fields of activity to highways and rail transport systems, adding the know-how and capabilities gained in defence projects.

Savronik possesses AQAP 2110, ISO 9000:2000 Quality and Secure Facility Certificates.



# CONTACT INFORMATION



## SDT Uzay ve Savunma Teknolojileri A. Ş.

Galyum Blok Kat: 2 No: 2 ODTÜ Teknokent, Ankara, TÜRKİYE  
Tel: +90.312 210 10 15 • Fax: +90.312 210 11 21  
info@sdt.com.tr • www.sdt.com.tr

Savronik was established in 1986 to operate in the field of defence electronics, with the aim of supporting the government's attempt to create a stronger defence industry.

With this aim in mind, Savronik has developed as a company with its own resources that places emphasis on engineering infrastructure, based on R&D, that works to satisfy the requirements of Turkey's defence industry by: investing in human resources, developing applicable and viable technologies for national solutions, and fulfilling the domestic industry's needs. Instead of focusing production on products of foreign origin, Savronik has been accumulating systems of its own design, growing the necessary dedicated expertise and engineering capabilities as alternatives for meeting the needs of national defence, and can truly be seen as an engineering firm offering original solutions.

Besides meeting national defence requirements, Savronik has also extended its fields of activity to highways and rail transport systems, adding the know-how and capabilities gained in defence projects.

Savronik possesses AQAP 2110, ISO 9000:2000 Quality and Secure Facility Certificates.



## SELEX Komünikasyon A. Ş.

Konya Yolu 25. Km. P. K. 24 Gölbaşı 06830 Ankara, TÜRKİYE  
Tel: +90.312 484 51 81 • Fax: +90.312 484 43 32  
sales@selex-comms.com.tr • www.selex-comms.com.tr

SELEX Komünikasyon, a Finmeccanica Company, offers a wide range of equipment, systems and services in the field of tactical and strategic communications, network-centric communications, naval communications, avionics and professional communications. Thanks to its acquired technologies and experience,

SELEX Komünikasyon, a member of SELEX Communications and Finmeccanica, is able to provide the best to customers in terms of innovation, application and quality, delivering "global solutions" for:

**Defence Applications:** Laser Warning Receivers, communication and navigation equipment for ground platforms, IR seekers,

**Naval Platforms:** Communications and navigation equipment, LED-based lighting systems.

**Airborne Platforms:** CNI, obstacle warning systems, self-protection equipment, displays and control panels, LED-based NVG-Compatible External and Internal Lighting Systems.

**Land Platforms:** Tactical and infrastructural networks, command & control systems, ground satellite systems.

**Professional communications:** A complete range of products for voice and data applications, such as TETRA, WiMAX and GSM-R, to fulfill the requirements of military, para-military and civil users.



## STM, Savunma Teknolojileri Mühendislik ve Ticaret A. Ş.

Mecnun Sokak, No: 58, Beştepe, Ankara, TÜRKİYE  
Tel: +90.312 223 68 00 • Fax: +90.312 223 68 18  
info@stm.com.tr • www.stm.com.tr

STM Defence Technologies Engineering Inc. is the leading systems and software engineering and consultancy company in Turkey, serving the military and civil sectors through innovative applications of technology and its accumulated knowledge. STM employs around 350 specialised staff, with expertise and education spanning a wide spectrum of specialties, facilitating STM's basic objective of bringing solutions to the changing technological requirements of its customers.

STM operates in the following three business areas: Engineering and Consultancy Services, Product Development Projects, and Acquisition Services

The technical expertise and capabilities of STM are naval projects, mission management and support systems, C4ISR at strategic and tactical levels, message formatting systems and marine & land border security and surveillance systems.

STM, which is an SEI Capability Maturity Model Integration (CMMI) Level 3 company, also possesses ISO 9001:2000, NATO AQAP-160, ISO/IEC 27001 and Facility Security Clearance certificates.

# CONTACT INFORMATION



## Turkish Aerospace Industries, Inc.

P. K. 18, Kavaklıdere 06692 Ankara, TÜRKİYE  
Fethiye Mah. Havacılık Blv. No: 17 Kazan 06980 Ankara, TÜRKİYE



TAI is the center of technology in design, development, manufacturing, integration of aerospace systems, modernization, modification, after sales support in Turkey.

Being the prime contractor of Turkish UAV and Attack/Tactical Reconnaissance Helicopter programs, TAI is engaged in design-development of MALE UAV and Primary-Basic Training aircraft. TAI is also the prime contractor of the avionic modernization programs of C-130s and T-38 trainers of Turkish Air Force. Modernization programs include Glass Cockpit conversion of S-70 helicopters, electronic warfare retrofit and structural modifications on F-16s, modification of CN-235 platforms for MPA/MSA missions.

TAI participates in the global scale international design and development programs like JSF and A400M. Also engaged in aerostructures manufacturing for fixed and rotary wing military and commercial aircraft for worldwide customers, some for as sole source supplier. By utilizing capabilities of the Turkish Armed Forces' Maintenance Centers, TAI also gives maintenance, repair and overhaul services to its customers.

## Tusaş Engine Industries Inc. (TEI)

Karum Ticaret Merkezi İran Cad. No: 21 Kat 4/C No: 404 Kavaklıdere Ankara, TÜRKİYE  
Tel: +90.312 468 37 04 • Fax: +90.312 468 37 06  
info@tei.com.tr • www.tei.com.tr



Tusaş Engine Industries, Inc. (TEI), was established in 1985 as a joint venture between TAI, TSKGV, THK and General Electric of the United States.

TEI completed assembly of its first engine and the production of engine parts in 1987, and in recent years has been responsible for the transfer of technologies related to engine manufacture, assembly and testing to Turkey. At the same time, the company has proven itself as a reliable, high quality manufacturer in the global market.

TEI's vision is to improve continuously with the aim of becoming a world class, high quality and competitive manufacturer of components, and a premier sales and engineering centre for customers around the world, optimising and utilising all of its assets and resources to pursue world market share.

**TEI's main activities are:** Engine Assembly and Overhaul, Parts Manufacture, After Sales Services and Design Engineering.

## Tekno Kauçuk Sanayii A. Ş.

Gebze Org. Sanayi Bölgesi İhsan Dede Cad. Doğan Lastik Fab. Gebze 41480 Kocaeli, TÜRKİYE  
Tel: +90.262 751 25 50 (5 Hat) • Fax: +90.262 751 05 70, 751 05 66  
info@teknokaucuk.com • www.teknokaucuk.com



Tekno Kauçuk Sanayii carries out its manufacturing activities at a plant in the Gebze Organised Industrial Zone. With a total area of 17,000m<sup>2</sup>, and enclosed facilities measuring 12,500m<sup>2</sup>, Tekno specialises in the products for the automotive, home appliance and defence sectors, which can be summarised as follows: Rubber metal suspension parts, Rubber grommets for automotive wiring harness systems, Diaphragms with textile inserts for air brake chambers & actuators and Door gaskets, seals, and bellows for frontloading washing machines.

In terms of our work in the defence sector, we produce vibration and shock elements of elastomere, and d-shock elements of elastomere and elastomer/metal and wire ropes.

We have taken part in a number of local defence projects, such as in the MilGem programme, in which, besides the supply and production of vibration and shock mounts, we have also carried out local shock calculations, and impedance and noise measurement services in the scale of FAT, HAT and SAT to the satisfaction of the Naval Forces.

Our vision is to become a company that introduces new technology and innovations to its areas of specialisation.

# CONTACT INFORMATION



## TEMSA AR-GE

TEMSA ARASTIRMA  
GELISTIRME VE TEKNOLOJİ A.Ş.



## Temsa Araştırma Geliştirme ve Teknoloji A. Ş.

Tübitak MAM Teknoloji Serbest Bölgesi Gebze 41470 Kocaeli, TÜRKİYE

Tel: +90.262 679 62 00 • Fax: +90.262 679 62 62

www.temsa-global.com

Temsa R&D, a subsidiary of Temsa Global, was established in June 2006 to serve all locations of Temsa Global (the Temsa Adana Factory, Temsa Adapazarı Factory, Temsa Egypt) for R&D studies. Today, Temsa R&D employs 210 personnel, of which 100 are from an engineering background. At its facilities in Gebze/Turkey, Temsa R&D covers the whole scope of product development, from design to concept, from concept to prototype production, from prototype to validated product. Its facilities, measuring 6,000m<sup>2</sup> of enclosed work space, on grounds of 10,000m<sup>2</sup> total area, house two workshops (Prototype production- metal components, Composite Part Production Workshop), one paintshop, QC labs and engineering offices. Starting in 2007, Composite Armour Production, Modelling (FEM) and Integration studies have been carried out in house; and in May 2008, Temsa R&D signed a contract with the Turkish Navy for the uparmouring of a brand new corvette project, Mil-Gem. Today Temsa R&D is uparmouring Temsa Global vehicles, as well as a brand new light armoured vehicle projects that will be exhibited for the first time during IDEF 2009.



## Tisaş Trabzon Silah Sanayi A. Ş.

De Gol Caddesi No: 13/1 Tandoğan 06580 Ankara, TÜRKİYE

Tel: +90.312 213 75 09 - 124 (ext) • Fax: +90.312 213 85 70, 213 78 06

sales@trabzonsilah.com • www.trabzonsilah.com

The Trabzon Gun Industry Corp. (TİSAŞ) was established in Trabzon in 1993. We are a Small and Medium Industry Development Organisation (KOSGEB) and Mechanical and Chemical Industry Corporation (MKE) coordinated company according to Law No: 3763 of the Ministry of Trade and Industry. TİSAŞ manufactures small arms and accessories for pistols, and operates on an open area of 11,000m<sup>2</sup> in the Trabzon Organized Industrial Zone, with a total covered area of 3,500m<sup>2</sup>. The manufacturing systems at TİSAŞ conform to the AQAP 120 Quality Assurance Requirements and the essentials of the ISO 9001 Quality Management system.

TİSAŞ began producing its first pistol, the Fatih 13, in 1994, and then began to produce Kanunı 16, Zigana M16, Zigana K, Zigana T, Zigana Sport, Zigana C45, Zigana F, Fatih 13 .380 ACP and the Zig M 1911. In order to assist in the international marketing of TİSAŞ's products, the company began trading operations from its Ankara District Office in 1998 to meet increasing demand.



## Transvaro Electronic Devices Industry & Trading Co.

Dereboyu Cad. Çalışkan Sk. No: 4 Halkalı Küçükçekmece 34303 İstanbul, TÜRKİYE

Tel: +90.212 473 01 00 • Fax: +90.212 473 01 55

Transvaro was established in 1988 as the first and one of the largest privately-owned investments in Turkey. Transvaro operates out of its own 5,000m<sup>2</sup> enclosed facilities in Istanbul, and has a track record of 20 successful years of continuous service to the defence sector.

Transvaro has delivered successfully night vision systems, thermal imagers, armoured vehicle simulators, laser target pointers, electronic time fuses, mine detectors to the Turkish Armed Forces.

### Quality Control

Transvaro's Quality Management System is based on ISO 9001:2000 and AQAP-2120 quality standards, and has been evaluated and certified by ABS Quality Evaluations (ABS QE) and the Ministry of National Defence Quality Management Department. Transvaro possesses a 'National Secret' secrecy level Factory Security Certificate, granted by the Ministry of National Defence.



# CONTACT INFORMATION



## TüBİTAK Marmara Research Center (MRC)

TüBİTAK Marmara Research Center PO. Box: 21 Gebze 41470 Kocaeli, TÜRKİYE  
Tel: +90.262 677 20 00 • Fax: +90.262 641 23 09  
info@mam.gov.tr • www.mam.gov.tr/eng/index.html



The Marmara Research Centre (TüBİTAK MRC), one of TüBİTAK's research and development units, was established as a sprawling campus at Gebze, midway between İstanbul and the industrial city of İzmit. Its vision is "to be among the leading science and technology centres in the world in the field of applied research", and its mission is "to contribute to the development of Turkey's competitive power, using science and technology." TüBİTAK MRC strives to fulfil its mission through close cooperation with the industry. It uses a customer-oriented and quality approach in its projects and industrial support activities, attested by the fact that all of the institutes under the authority of TüBİTAK MRC have received the ISO 9001:2000 Quality Management Systems Certificate, as well as the ISO 140001:2004 Environmental Management System Certificate. TüBİTAK MRC carries out its internationally acknowledged work in laboratories accredited according to the Experiment and Calibration Proficiency by DAR/DAP in 2002. TüBİTAK MRC received the National Quality Incentive Award in 2003.

## TüBİTAK-SAGE

The Scientific and Technological Research Council of Turkey Defence Industries Research and Development Institute  
Samsun Yolu, Lalahan, PK 16 Mamak 06261 Ankara, TÜRKİYE  
Tel: +90.312 590 90 00 • Fax: +90.312 590 91 48 – 590 91 47  
sage@sage.tubitak.gov.tr • www.sage.tubitak.gov.tr



The Defence Industries Research and Development Institute - SAGE, was established in 1972, and is active in three locations: the METU Guidance Control Laboratory; the Ankara Subsonic Wind Tunnel; and the Lalahan Site, which is located 30km. from the Ankara city centre. The institute is a part of the Scientific and Technological Research Council of Turkey (TüBİTAK), specialising in the field of defence industry. The main function of SAGE is to carry out R&D for guided and un-guided ammunition systems/subsystems, including engineering and prototype production, starting with fundamental research and conceptual design. Most of SAGE's projects are carried out in coordination with Turkey's related defence institutions. SAGE believes international cooperation to be as important as national partnerships, and is looking to exchange knowledge with partners from allied countries.

## TüBİTAK Ulusal Elektronik ve Kriptoloji Araştırma Enstitüsü

TüBİTAK UEKAE, PO Box: 74 Gebze 41470 Kocaeli, TÜRKİYE  
Tel: +90.262 648 10 00 • Fax: +90.262 648 11 00  
uekae@uekae.tubitak.gov.tr • www.uekae.tubitak.gov.tr



TüBİTAK (The Scientific and Technological Research Council of Turkey) is the governing body for the research activities in Turkey. TüBİTAK founds private and public sector companies for their research activities and also performs research and development itself. UEKAE (National Research Institute of Electronics and Cryptology) is one of the several research institutes under TUBİTAK and works in the area of information security, communication and advanced electronics. UEKAE is specialised on information security since more than three decades and is the major provider of information security products and services in Turkey. Turkish Armed Forces rely on cryptographic products developed by UEKAE for their secure communication requirements. UEKAE is also an active contributor of NATO activities related with information security and NATO uses secure communication equipment of UEKAE during military exercises in the Mediterranean.

# CONTACT INFORMATION



## UNIFO Food Industry and Trading Inc.

Gebze Organize Sanayi Bölgesi 400. Sokak, Gebze 41480 Kocaeli, TÜRKİYE  
Tel: +90 262 751 33 25 (pbx) • Fax: +90 262 751 08 35  
www.unifo.com.tr

The UNIFO Food Industry and Trading Co. was founded in early 1997 to produce high quality Meals Ready-to-Eat (MREs) packed into pouches and aluminium trays, for military and civilian use. UNIFO's MRE plant comprises 7,500m<sup>2</sup> of enclosed facilities and 4,750m<sup>2</sup> of open area in the Gebze Organised Industrial Zone. The MREs manufactured by UNIFO have a two-year shelf-life under ambient temperatures and contains no preservatives. UNIFO is also manufacturing and supplying heating pouches with MREs and Lavash bread with a one year shelf-life under ambient temperatures.



## VESTEL Savunma Sanayi A. Ş.



Silikon Blok Zemin Kat No:14 Teknokent/ODTÜ 06531 Ankara, TÜRKİYE  
Tel: + 90.312 210 10 38 • Fax: + 90.312 210 10 78  
vestel.savunma@vestel.com.tr • www.vesteldefence.com

VESTEL Defence Industry Inc. is the youngest member of the VESTEL Group of Companies, founded in 2003. VESTEL Defence, backed by the experience, know-how and massive production facilities of the VESTEL Group, is eager to serve as a leader in the areas of electronics, embedded software, computer-based training systems, autonomous systems, alternative energy systems, electronic warfare systems and command & control systems for naval platforms.

### Our Areas of Interests

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>• Homeland Security</li> <li>• Command &amp; Control Systems</li> <li>• Computer-Based Systems <ul style="list-style-type: none"> <li>o Training</li> <li>o Simulation</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Autonomous Systems (land, sea, air)</li> <li>• Alternative Energy <ul style="list-style-type: none"> <li>o Wind</li> <li>o Solar</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Dual usage solutions <ul style="list-style-type: none"> <li>o Commercial</li> <li>o Military.</li> </ul> </li> </ul> |
|--|--|---|



## Yakupoğlu Tekstil ve Deri Sanayi Ticaret A. Ş.

Esenboga Havalimanı Yolu Üzeri 20. Km. Akyurt 06750 Ankara, TÜRKİYE  
Tel: +90.312 398 12 13 • Fax: +90.312 398 98 78  
www.yakupoglu.com.tr

Yakupoğlu operates from facilities in Ankara located on grounds totalling 72,000m<sup>2</sup>, of which 50,000m<sup>2</sup> is enclosed production area, and employs over 1,500 skilled personnel. Guarantee of Quality: EN ISO 9001:2000 Quality of System Certificate, CE Marking by SATRA International Notified Body, Teknoteks Factory Laboratory Accredited by TÜRKAK and SATRA and NATO Standards. All our products are developed and designed to meet the specific requirements of each customer, and provide a high level of comfort and durability to the wearer. To ensure durability in all weather and field conditions, Yakupoğlu uses the toughest and most advanced materials in production; testing all raw materials in its accredited laboratory for their performance in terms of sunlight exposure, breathability, humidity, moisture absorption, etc., continuing with stringent testing both during and after production, and thus ensuring the quality of the finished product.

Yakupoğlu is one of the largest suppliers to the Turkish Armed Forces and Police; and exports its products to the Albania, Azerbaijan, Belgium, Denmark, Germany, Georgia, France, Italy, Lebanon, Oman, Portugal, Qatar, Spain, UAE and the UK.

# CONTACT INFORMATION



## YALTES Electronic and Information Systems, Inc.

Kurtköy Yenişehir Mahallesi Cumhuriyet Bulvarı  
Lale Sokağı (16 Nolu Sokak) No: 8 Pendik 34891 İstanbul, TÜRKİYE  
Tel: +90.216 482 30 60 • Fax: +90.216 482 30 51  
yaltes@yaltes.com • www.yaltes.com

YALTES



Yaltes is one of Turkey's most promising companies in the military fields, and is today playing a very important role in a number of projects being managed by national and international main contractors.

Aware of today's information technology requirements, Yaltes demonstrates a solid understanding and knowledge of military activities, demands and quality norms; and with this in mind, Yaltes follows technological developments and delivers advanced solutions for SW & HW of Combat Management Systems, to armed forces, particularly naval forces, around the world.

Yaltes leads other industrial organisations by presenting the development and implementation of robust and reliable engineering solutions and providing valuable consultancy services in defence industry projects in particular.

The company's core business is the development, manufacture and integration/installation of electronic, combat data processing and platform management systems for militaries, in particular for naval applications.

## YONCA - ONUK JV

Tersaneler Caddesi Yakut Sokak 3 Tuzla 34940 İstanbul, TÜRKİYE  
Tel: +90.216 392 99 70 • Fax: +90.216 392 99 69  
info@yonca-onuk.com • www.yonca-onuk.com



Yonca-Onuk JV is situated in Istanbul, operating out of 12,500m<sup>2</sup> of covered production area and air-conditioned composite production shop. It has the capacity to build high-speed boats up to 55m in length and 400 tonnes displacement in advanced composites. Production is in full compliance with AQAP-2120, with engineering and production as per Det Norske Veritas (DNV) classification rules.

The objectives of Multi Role Tactical Platform (MRTP®) concept are to develop and demonstrate a multi-role tactical platform, employing advance composites and technologies, to Minimise: Cost, Size, Crew and Signature; and to Maximise: Range, Mission/Weapon payload, Speed, Shallow Water Capabilities, Reliability/Availability/Maintainability, Modularity/Reconfigurability and Multi-Mission capabilities.

The Yonca-Onuk Joint Venture is the builder of the ONUK MRTP15/16® Fast Intervention Craft; ONUK MRTP29® Fast Patrol Boats; ONUK MRTP20® Improved Fast Intervention Craft; ONUK MRTP22® Special Operation Craft; and ONUK MRTP29/33® Fast Patrol/Attack Craft for the Turkish Coast Guard, the Turkish Navy and other international customers.

## Yüksel Savunma Sistemleri A. Ş.

Eskişehir Yolu, 9. Km. ODTÜ MET, (Mikro Elektronik Teknolojileri Merkezi) A-1 Blok-4  
Teknokent 06520 Ankara, TÜRKİYE  
Tel: + 90.312 284 2866 • Fax: + 90.312 284 2870  
info@yukselsavunma.com • www.yukselsavunma.com.tr

YÜKSEL SAVUNMA  
SİSTEMLERİ A.Ş.



Yüksel, a leading company in the Turkish construction industry, branched out into the defence sector in 2006, initiating production of high-tech defence systems. Yüksel Defence Systems Inc. (YSS), is the 14th company to be established under Yüksel Holding.

Yüksel's strategy is to draw benefit from the abilities of small technology firms, and transfer those to the defence sector, aiming to create very special high-tech R&D designs and produce final products to meet the real military requirements. To this end, the company has launched a very special project to develop a Remote Controlled Weapon Station – IMTAKS.



# CONTACT INFORMATION



**SaSaD**



**SaSaD**

Paris Cad. Yazanlar Sk. No: 4/106 Kavaklıdere 06540 Ankara, TÜRKİYE  
Tel: +90.312 426 22 55, 428 09 01 • Fax: +90.312 426 22 56  
e-mail: sasad@tr.net • www.sasad.org.tr

Defence Industry Manufacturers Association, SaSaD was established by 12 companies in 1990 with the support of Ministry of National Defence. SaSaD is the association for producers of defence systems and equipment for domestic and international markets.

#### **Our Mission:**

To contribute to a powerful defence sector by gathering Turkish defence industry establishments under SaSaD umbrella.

#### **Our Vision:**

To contribute for a Turkish defence industry which is Coordinating with the requirement and acquisition authorities, Cooperating with other enterprises in the sector, Capable of satisfying defence and security requirement of our country, Competing in the international defence market

As of December 2008, SaSaD encompasses 102 companies in 10 sub-sectors of defence industry:

- Land Platforms
- Sea Platforms
- Air Platforms

- Informatics
- Electronics
- Electrical Equipment
- Weapons, Ammunition, Rockets and Missiles
- Research, Development and Engineering
- Materials, Mouldings and Parts
- Uniforms – Footwear

With US\$2.010 Billion of annual turnover and US\$420 Million of export, Turkish Defence Industry has reached to a considerable financial size together with a high level of technology. With a number of products our industry is proud to serve Turkish Armed Forces which have an important position and size in NATO.

In parallel with this progress of the defence industry SaSaD gives high priority to:

- Coordination with the requirement and acquisition authorities,
- Development of international cooperation and promotion of exports,
- Representation defence industry sector in national and international platforms,
- Encouraging cooperation among its members,
- Reporting financial outlook of the sector,
- Organising inquiries and developing proposals through specialized commissions.